

## MARISA BROOKE SANDERS

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### OBJECTIVE

Obtain a challenging leadership position applying creative problem solving to learn new management & networking skills in Chemistry

### EDUCATION

**Bachelor of Science/Chemistry ACS-Certified**, The College of New Jersey, Ewing, NJ, *May 2013*

Minor in English

Current GPA of 3.785

### HONORS

**Gamma Sigma Epsilon** Chemistry Honor Society, *September 2011-present*

**Sigma Tau Delta** English Honor Society, *May 2011-present*

**Dean's List**, TCNJ, *(Every semester)*

**Edward J. Bloustein Distinguished Scholar**, *2009-present*

**New Jersey Principals and Supervisors Association Student Leadership Award**, *2009*

**Comcast Leaders and Achievers Award**, *2009*

**Toyota Community Scholars Award**, *2009-present*

**Raoul Wallenberg Award finalist**, *2009*

**TD Bank American Dream Scholarship Recipient**, *2009*

**Kiwanis-Key Club Distinguished Editor Award**, *2009*

### LEADERSHIP EXPERIENCE

#### Roles in College:

**\*President, Student Chemists Association** (*May '11-present*)

Led the painting of a Quantum Tunnel in the chemistry building basement (featured on the November/December cover of *inChemistry*); in the process of implementing a green chemistry outreach program at a few middle schools in the Trenton area; initiated program "Chemistry Corner" in the computer lab that showcases chemistry-inspired poetry, photography, and visual art by students from all areas of academia at TCNJ

**Webmistress** (*May '10-May '11*) Created and maintain the organization's website ([www.tcnjchemistry.wordpress.com](http://www.tcnjchemistry.wordpress.com)); the twitter account, and the Facebook page. Wrote newsworthy and photojournalistic pieces on club activities, such as science demonstrations at local elementary schools and at the Trenton community festival.

**General Member** (*December 2009-April 2010*)

Volunteer for the organization; helped fundraise and monitor the SCA-sponsored "Walk on Water: Corn Starch Run" during TCNJ's "Celebration of Science"

**\*Senator of Science, Student Government** (*January '11-September '11*)

Representative for the Chemistry department; attended Open Houses and college tours and encouraged prospective chemistry students to apply for the program; mingled with students and faculty and answered questions regarding the science major.

**\*Representative on the School of Science Board** (*January '11-present*)

Act as a liaison between the student body and the dean of science; collaborate with other student representatives monthly to discuss areas of improvement for the School of Science; deal with issues regarding better class registration and student disabilities in the lab

#### Roles in High School:

**\*Founder of Project GIRL POWER** (*2006-2009*)

A project I developed that focuses on how the media affects the self-esteem and confidence in adolescent girls. Through group work and expressive activities, the girls learn to like themselves for who they are as individuals. Exercised at local middle schools. I was 1 of 100 students recognized nationwide by the Toyota Community Scholars program for my dedication to Project GIRL POWER.

**\* Editor of Key Club** (*2007-2009*)

Recognized at the 2009 District Convention as a Distinguished Editor and won 3rd place in the state for "Best Key Club Newsletters;" led the UNICEF awareness and fundraising project for 2009 and raised over \$5,000; created monthly newsletters for the organization using Adobe that detailed the organization's activities; maintained the organization's bulletin boards. Attended the 2008 and 2009 Key Club District Convention, where I participated in the Walk for Children's Specialized Hospital and helped raise over \$100,000. Also ran the 2008 ARC Carnival (Association for Retarded Citizens) by supervising booths and organizing activities;

raised a total of \$1,384 for local Arc of Warren County. Volunteered for Alex's Lemonade Stand and Big Brothers Big Sisters; helped raise money for those struggling with childhood cancer.

**\*President of E.R.A.S.E. (Ending Racism and Sexism Everywhere) (2005-2009)**

Painted murals and created bulletin boards in the high school that promote awareness of human trafficking and the genocide in Darfur. Organized the 2008 and 2009 International Food Festivals, an event which advocates diversity in the high school through the consumption and display of various ethnic foods. Raised over \$1000 for Doctors without Borders.

**\*Editor-in-Chief of *The Tiger Times* (2007-2009)**

Served as the sports and feature editor before becoming Editor-in-Chief. Delegated article writing to general members and worked with a board of Opinion, Feature, Sports, and Entertainment section writers to put out a 15-page newspaper every month; created each of the newspapers using Adobe Pagemaker. Also communicated with businesses within Warren County for advertisements. Developed strong relationships with the writers and teachers who worked on board *The Tiger Times*.

**\* Editor-in-Chief of *Lyric* (2006-2008)**

Acted as the emcee at open mic nights for the club by hosting monthly poetry readings for students and faculty. Used Publisher to lay out the literary magazine and 2-page seasonal *miniLyric* publications that came out monthly. Also attended semiannual meetings for the Hackettstown High school library and wrote reviews and recommendations for young adult literature.

**\*President of the Spanish Honor Society (2008-2009)**

Developed a tutoring system for the Spanish department; members of the Spanish Honor Society received credit hours for the organization by helping students with Spanish homework. Also organized dancing and get-togethers for members at local Spanish restaurants.

**\*Sargent and Arms of the National Honor Society (2008-2009)**

Maintained order during meetings; volunteered and reported on NHS activities for the *Tiger Times*. Won the National Honor Society Scholarship at graduation for most credit hours, dedication, and leadership toward the organization.

**\*Treasurer of Mu Alpha Theta Math Honor Society (2008-2009)**

Kept tabs on the club's finances. Created a "Keeping it real" (with the  $i^2$ ) t-shirt and used it as a fundraiser for the organization. Bought new calculators for the school with the money raised.

## WORK EXPERIENCE

**\*The College of New Jersey**

*August 2011-Present*

**Science/Math and Writing Tutor**

*7-10 hours/week*

Lead Analytical Chemistry problem solving workshop sessions twice a week; help students think about approaches to questions and new methods to work them out

**\*Club Libby Lu, Rockaway, NJ**

*June 2008-February 2009*

*12-16 hours/week*

Club Counselor; acted as a Hannah Montana impersonator at birthday parties for "tween-aged" girls by singing and dancing. Cashiered and organized parties.

## RESEARCH EXPERIENCE

**\*MUSE (Mentored Undergraduate Summer Experience), The College of New Jersey**

*June 2011-August 2011*

**The Nature of Metal Ion Binding in Chemically Modified DNA Duplexes**

Spent an entire summer researching with a professor in the chemistry department; learned contemporary methods of instrumentation, including Electron Paramagnetic Resonance, Circular Dichroism, and UV-Vis. I am continuing my summer research during the Fall 2011 semester by applying computational methods to looking at the potential hydrogen bonding and energy conformations of duplexed DNA.

## HOBBIES

\*Cooking zany foods

\*Bird watching

\*The Beat Generation

## 2012 Student Leadership Awards Application Form

Please complete all fields and e-mail this form to [undergrad@acs.org](mailto:undergrad@acs.org) (include "2012 Leadership Awards" in the subject line) or FAX to 202-872-8068. All paid student members who have completed at least one year of undergraduate studies in the chemical sciences and have held elective office in an active student chapter are eligible to apply. Preference will be given to sophomores and juniors.

**All applications must be received by October 26, 2011**

1. Full Name:	Manisa Saunders
2. Email Address:	Saunders22@tcnj.edu
3. SSN:	158-90-9244
4. Mailing Address:	59 Wood Duck Court Hackettstown, NJ 07840
5. Telephone:	(908)343-4509
6. Fax:	
7. Institution name:	The College of New Jersey
8. Faculty Advisor /email	Abby O'Connor oconnoe2@tcnj.edu
9. ACS Student Member Number:	30138778
10. Expected Graduation Date:	May 2013

Manisa Saunders  
Applicant Signature

October 26, 2011  
Date

AR  
Faculty Advisor Signature

10/26/11  
Date

Marisa Sanders  
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October 26, 2011

Dear Ms. Bakowski,

Greetings! I'm a junior chemistry major and the president of the Student Chemists Association (SCA) at The College of New Jersey. I'm applying for the 2012 ACS Leadership Award. I originally found out about the opportunity while perusing the 2011-2012 "Welcome Back Package" and I've been hooked since! The leadership institute sounds like an amazing opportunity to both enhance my leadership skills and interact with a diverse group of chemistry enthusiasts and leaders in the hopes of strengthening my TCNJ ACS student chapter. It would be an honor to attend the institute.

The Student Chemists Association has allowed me to find my niche at TCNJ and I can only give back to the organization by trying to enhance it. I originally joined SCA after switching majors from English to Chemistry (I helped my freshman year roommate nursing major with her biochemistry homework, remembered how much I enjoyed chemistry in high school, and saw the light!). While my transition into the new major was intimidating at first, the upperclassmen SCA members were welcoming and encouraged me to run for the position of "webmistress." I served as the editor-in-chief of the newspaper and literary magazine in high school and had experience with Adobe pagemaker, HTML, Java, and deadlines, so I gladly accepted the challenge. Little did I know that the position would allow me to create a new website ([www.tcnjchemistry.wordpress.com](http://www.tcnjchemistry.wordpress.com)), Facebook page, and Twitter account for the organization! Best of all, I was given the opportunity to both report on and volunteer at SCA-sponsored science demonstrations at local middle schools, at chemistry department student-faculty potluck dinners, and even at our bimonthly meetings. I could apply my love for English by writing newsworthy pieces on SCA events and fundraisers, mingle with new members by attending SCA-sponsored activities, and rejoice in my love for chemistry, all under the organization of SCA. Meanwhile, I learned how to delegate the roles of photographer and reporter to other chapter members also interested in strengthening the publicity of our ACS student chapter. Never before did I feel more at place and content than at an SCA meeting. I knew this was the club for me, and I wanted to do everything in my power to spread my compassion for SCA campus-wide.

I decided to run for both SCA president and Senator of Science through TCNJ's Student Government last semester in the hopes of providing our ACS student chapter with an even bolder presence on campus. I enjoyed the campaigning process; under the slogan of "the world is made of *alkynes* of people, vote Marisa for Senator of Science" I was able to creatively spread awareness of organic chemistry to non-science majors on campus. I won both positions and felt like I was floating on cloud 9. As a Senator of Science, I represent the Chemistry department at Open Houses and campus tours. I have developed my public speaking and interpersonal skills by mingling with prospective TCNJ students and their parents at Accepted Student Days and during School of Science celebrations. I have even become a tutor for the chemical and physical sciences and run biweekly Analytical Chemistry problem solving workshops. I truly enjoy each of these activities; I feel good after each session and cannot wait until the next one. Now as Senator of Science, SCA president, and a tutor, I have an even greater means for involving the entire campus in ACS student chapter activities.

This past summer, while pursuing chemistry research with TCNJ's MUSE program (Mentored Undergraduate Summer Experience), I decided to give this whole campus-wide SCA involvement idea a try. Over the summer, I spent a great deal of time in the basement of the chemistry building running Electron Paramagnetic Resonance samples. On my way to the basement, I'd often pass a blank wall and think, "what a pity, this wall holds so much potential for creative work. What if we painted a QUANTUM TUNNEL down here?!" After getting the okay to paint the tunnel, I made it a college-wide project. While the students

doing chemistry research designed the "quantum" aspects of the tunnel, we had other majors work on the background painting. I was happy to include the entire TCNJ community and share this love for chemistry campus-wide. This project not only gave me the opportunity work on my communication skills by reaching out to students in other academic areas, but it also showed me how a diverse range of talents can be gathered and put toward a common goal. Our tunnel will be featured on the cover of the November/December 2011 edition of *inChemistry*.

While the quantum tunnel project appealed to the large-scale campus community, I feel like our ACS student chapter could benefit from involving the entire school in more events in the future. This past September, I came up with another project: "Molecular Dances and Particle Romances: SCA's Computer Lab Advances." The premise of the project was to revamp the chemistry computer lab with chemistry-inspired poetry and visual art. I encouraged students to "think outside of the Particle in a Box" and to look at chemical reactions as concrete poetry (we'd also accept photoshopped crystal lattices and pieces like "Ode to my pH meter"). I also went back to the English department and tried to inspire my old friends there to write a few "scientific" pieces of prose. While we did obtain a few submissions, the turnout wasn't as great as I expected and we're now accepting pieces on a rolling basis. I think attending the 2012 ACS Leadership Institute would allow me to better understand members' interests. I want to learn from other ACS leaders on how they effectively motivate and engage their members and then apply these tips to SCA by implementing projects that everyone can enjoy.

I think the TCNJ SCA could also benefit from developing closer relations with the local Trenton ACS section and division leaders. In celebration of the International Year of Chemistry, we have made it our mission to promote "green chemistry" principles and practices throughout the Trenton Community. We're currently working on establishing a connection with a middle school in Trenton to educate students early-on about sustainability. The program will consist of green, "hands-on" demonstrations and experiments and stimulating, age-appropriate short courses on topics such as pollution prevention, recycling, water purification, and energy conservation. Ultimately, we want to encourage the middle school students to understand that they can make a difference by working together on creative solutions to environmental problems. By educating them now, they can become practitioners of sustainable development for our future (and maybe even develop a love for science!). While we should have enough SCA members to help run the program, I think it would be a great idea if we could get the local ACS section involved in our activities too. I feel as though The ACS Leadership Institute has many valuable tips to offer in terms of communication skills between ACS student chapters and the local section. I wouldn't mind getting our chapter involved in other local and divisional projects as well!

I have developed a strong interest in TCNJ's ACS student chapter while serving as webmistress and reporting on and volunteering at club events. Now as club president, I want to continue implementing these club activities, but also reach out to the entire college campus, to the local section, and even to divisional and national committee chairs and younger chemists at other student chapters, to help get our ACS student chapter involved on an even larger scale. The ACS Leadership Institute would award me with the management, leadership, and networking skills necessary to collaborate with other ACS leaders and make our presence as an organization even louder and prouder than before. Together, through joint programs that advocate green chemistry awareness, we can work to reduce our carbon footprint, yet make an even larger mark on the community. It would be an honor to attend the 2012 ACS Leadership Institute and come closer to reaching this goal.

Thank you!

Marisa Sanders  
President of the Student Chemists Association  
TCNJ Class of 2013



## The College of New Jersey

**Department of Chemistry**

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October 26, 2011

Dear American Chemical Society,

I am pleased to write a letter of reference for Marisa Sanders. I was the faculty advisor for TCNJ's Student Chemist Association. I am currently the faculty financial officer. My additional service to ACS is as chair elect of the Trenton Local Section, chair of the Younger Chemist Subdivision of PROF, and webmaster for PROF. I understand ACS and believe strongly in its missions and goals to assist our fellow chemists in their careers. I have attended the Leadership Development Workshop twice, once as a part of the Younger Chemist Committee Leadership Awards and once as a local section leader. I have found the training I received to be invaluable to my volunteer and work activities.

I believe Marisa would be a phenomenal student for the LDW. She has been president of SCA for only a few months and she has already surpassed all my expectations. She has carefully balanced her volunteer activities and her college studies more successfully than I have seen in other student leaders. She has already led the group in designing the Quantum Tunnel mural during the summer. Marisa was so excited with the mural that she took the initiative to contact *In Chemistry* magazine to tell them about their activities. The Quantum Tunnel is featured on the cover of the magazine (Winter 2011). During the academic year, she hosted one of the most attended recruitment events. Her group is currently planning to do some outreach events with local elementary schools. At TCNJ, the chemistry faculty allows students to make or break the SCA group. The group is completely student led and faculty is only there for support when needed.

What makes Marisa so successful is her phenomenal demeanor. She has a great personality and very strong innate ability to convince people to help her do her work. In addition, she is my class tutor for Analytical Chemistry. She has successfully tutored my class on group problem solving. As I watch her tutor, she is always encouraging and cheerful with all of the students.

I would strongly recommend that you invite Marisa to the LDW. I believe the connections she will make and the skills she will learn will be invaluable to her as she continues with her career as a chemist!

Sincerely,

Benny C. Chan  
Assistant Professor