

**Application for a Sponsored Research Grant
(Summer 2010)**

Submitted by

Dr. Dharshi Bopegedera

Lab I, The Evergreen State College

Olympia, WA 98505

Phone: (360) 867-6620

Email: bopegedd@evergreen.edu

EVERGREEN

THE EVERGREEN STATE COLLEGE

E-mail: bopegedd@evergreen.edu

Voice: 867-6620

October 14, 2009

The Sponsored Research Committee
The Evergreen State College
Olympia, WA 98505

Members of the Sponsored Research Committee,

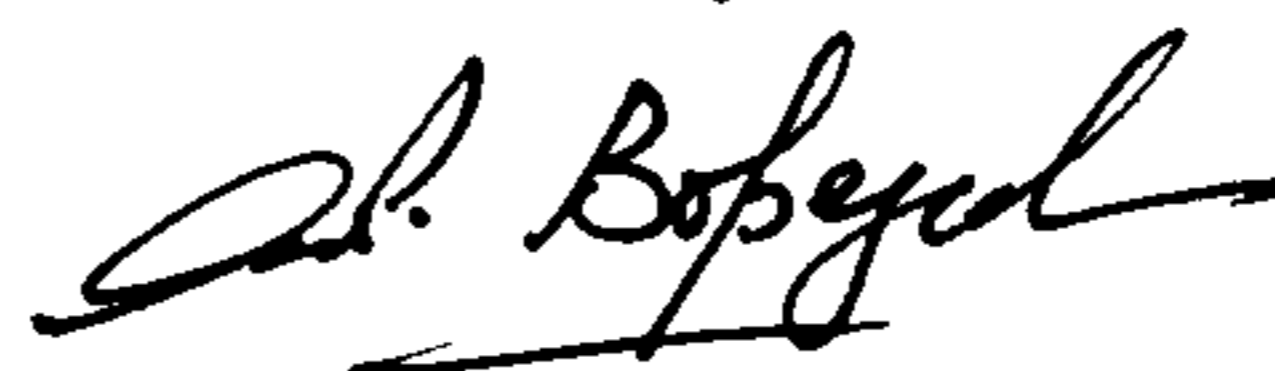
PROPOSAL FOR A SPONSORED RESEARCH GRANT (SUMMER 2010)

Enclosed is my application for a Sponsored Research Grant for the summer of 2010.
The following documents are attached.

1. Application for the grant
2. Letters of recommendation by Dr. Clyde Barlow, and Dr. Rebecca Sunderman
3. My curriculum vitae
4. Reports from previous Sponsored Research Grants

Should you require further information, I will be happy to provide them. I am hopeful of your favorable consideration. Thank you.

Yours sincerely,



Dharshi Bopegedera, Ph.D.
(Member of the Faculty, Chemistry)

APPLICATION FOR A SPONSORED RESEARCH GRANT - SUMMER 2010

Statement of proposed activity:

I wish to apply for a Sponsored Research Grant during the summer of 2010 to pay my salary for a five-week period during which, **I plan to complete a laboratory experiment and prepare the results for publication in the Journal of Chemical Education. In addition, I will write two more articles to the same journal on work I have already completed.**

Purpose and scope of activity:

I was a member of the "Curriculum for the Bioregion" consortium during the 2008-09 academic year. This consortium brought together 26 chemical educators from many colleges, universities, and community colleges in the Puget Sound region. We were directed to select a "big idea" in chemistry and a "big idea" in sustainability and examine ways in which they could be combined to generate a teaching activity (lecture, workshop, or laboratory). Jean McGregor of the Washington Center for Higher Education coordinated the group. We met several times over the course of the academic year to generate ideas, share our teaching activities and obtain/provide feedback to each other, and finally to publish this work on the web. The web publication is currently being prepared by the staff at the Washington Center for Higher Education.

My teaching activity was titled "A General Chemistry Laboratory Exploring the impact of increased acid levels in ocean waters on coral." I conducted preliminary experiments on this lab activity in the summer of 2009. I spent much time developing a method that could be used with first year undergraduate students within the time frame of a typical lab period. It is difficult to develop a lab that explores concepts such as the impact of increased acid levels on ocean waters on coral because such impacts in measurable quantities can only be observed over a long period of time. Therefore one must find creative ways to develop a method that explores such impacts so that it would fit within one or two (at the most) lab periods (each lab period is of 3 hour duration). I believe I have developed such a method but I need to collect a lot more data in order to publish this work. I have found it very difficult to find a substantial chunk of uninterrupted time to complete this work during the academic year. Therefore I plan to complete this work in the summer of 2010.

Once the experiment and data analysis are complete, I intend to write it up for publication in the Journal of Chemical Education and use it as a teaching tool in my own classes. Additionally, I have two papers I am preparing for publication ("Putting the Lab at the Center of Teaching and Using a Lab Practical Exam as a Tool to Assess Student Learning" and "College Students Mentoring Middle School Children and Learning Chemistry in the Process") which also have been put on the back burner due to lack of time since the start of the 2009-10 academic year.

I am hopeful that with the support of the Sponsored Research Grant I will be able to complete all of the above work in the summer of 2010.

Professional agenda and how the proposed activity fits:

One of my personal goals is to teach chemistry in a way that shows its applicability and relevance to society. This often involves showing students that knowledge of chemistry is essential for solving some of the most complex problems we face today. I believe that "A General Chemistry Laboratory Exploring the impact of increased acid levels in ocean waters on coral" will be a great tool in achieving this goal. I would like to share this teaching tool with the greater chemistry educators' community by publishing my lab data and analysis in the Journal of Chemical Education. This journal is published by the American Chemical Society and is the most respected journal in the chemical education community.

I hope to use this lab activity in my own teaching of general chemistry ("Introduction to Natural Science" program during the 2010-11 academic year and beyond). The teaching of this lab involves several different assignments for students.

- **Library Assignment:** Students collect articles from the campus library (from a book or a peer reviewed journal) on the impact of increase in the acidity of ocean waters on the health of marine life and write short summaries of their articles.
- **Lecture Discussion:** Bring copies of the article for the entire class (or put articles on a web site for easy access for other students) and give a short oral report on the article to the class. Students take notes on their peers' presentations.
- **Lab Work:** Over two lab periods, students conduct the experiments, gather data, write reports incorporating lab data, and present their results in the context of the lecture discussion on the impact of acid rain on the health of marine life. To this report, students attach the article they collected, the annotated bibliography, and notes taken in class during the discussion.
- **Presentation of Lab Work:** Provide an avenue for students to present their lab work to another class, to a student club, a local school, or at a science fair.

In completing this work students will use several laboratory techniques (using an analytical balance, calibrating and using a pH meter, preparing solutions of desired concentrations) and the "big ideas" in chemistry they learned in the classroom (acid/base chemistry, stoichiometry, pH, relationship between pH and acid concentration) to quantitatively investigate a "big idea" in sustainability (impact of increased acidity on coral and on marine life in general). It is hoped that by doing this work, students will recognize that the decisions they make in their lives have an impact on other organisms on earth. Students will re-visit many of the chemistry concepts and laboratory techniques they learned earlier in the year which will help strengthen these concepts and skills.

Benefits:

The Journal of Chemical Education, published by the American Chemical Society, is a peer-reviewed journal at the forefront of chemistry education at the undergraduate level. It is read and used by chemistry educators from around the world. Publishing my

articles in this journal will enable me to expose my work to the worldwide chemistry community. In the past I have published the following articles in this journal and I am also a reviewer for the Journal of Chemical Education.

1. "Light" - An Interdisciplinary Teaching/Learning Experience, A.M.R.P. Bopegedera, J. Chem. Educ., 2005, 82, 55.
2. STEMing the Tide: Using Career Week activities to Recruit Future Chemists, A.M.R.P. Bopegedera, J. Chem. Educ., 82, 1505, (2005).
3. An Inquiry-Based Chemistry Laboratory Promoting Student Discovery of Gas Laws, A.M.R.P. Bopegedera, J. Chem. Educ., 84, 465, (2006).
4. "A Local Section's Attempt to Recruit the Many Faces of Chemistry", A.M.R.P. Bopegedera, J. Chem. Educ., 84, 1589 (2007).

Many generations of students at The Evergreen State College will benefit from doing this lab in their general chemistry classes.

Detailed plans for carrying out the activity:

I have developed the method and collected about 1/3 of the necessary data for this lab activity. I conducted the preliminary analysis of this data and it looks promising. By collecting more data and completing the analysis in the summer of 2010 I will be able to write this work for publication. I hope to spend 3 weeks on data collection and analysis and two weeks on writing. I have all the chemicals, supplies, lab equipment, and software tools I need to carry out the lab work and data analysis. If time permits I plan to write two other papers for which I already have the necessary data.

Dates and length of salary:

I can complete this work during either the first or the second summer session.

Remuneration:

I will not be receiving remuneration from any other source during the summer of 2010.



The Evergreen State College

October 18, 2009

Sponsored Research Grant Committee:

I am writing to support Dr. Dharshi Bopegedera's application for 5 weeks of support during summer, 2010, to complete research on laboratories interrelating topics in sustainability and chemistry, and to submit results of this work for publication. Her research deals with the development of creative chemistry laboratory experiences for undergraduate students. She has become Evergreen's most energetic promoter of approaches to incorporate science into interdisciplinary college curricula. Her proposal rests upon several years of research and teaching experience at Evergreen.

Dr. Bopegedera repeatedly uses her academic background in physical chemistry and her experiences in the classroom to develop new approaches to chemistry laboratories. In 2005 she has had two articles published in the "Journal of Chemical Education." These articles "STEMming the Tide: Using Career Week Activities to Recruit Future Chemists" and "The Art and Science of Light" represent the end products of her educational research and serve as priceless advertising of the Evergreen approach to education. The folks in student recruiting should be using these materials in their efforts to attract students to Evergreen,

During the summer of 2010, Dr. Bopegedera proposes to study methods to present effects of increased ocean acidity on coral in an experimental laboratory setting for students. When the science and the methodological approaches have been resolved, Dharshi will submit a paper to Journal of Chemical Education. The high school, college, and university chemistry teachers that read the Journal of Chemical Education are precisely the audiences we want to influence. Having an Evergreen authored paper interrelating chemistry and sustainability issues dealing with ocean acidification is a wonderful venue to promote what Evergreen does so well.

The 5-week stipend for the summer would provide her with time to compile and publish results of her studies. Dr. Bopegedera has a history of active involvement in campus affairs that includes bringing guest speakers to campus, organizing meetings, organizing and teaching new core programs, active work on hiring committees, and serving as Planning Unit Coordinator for Scientific Inquiry. The Chemistry Club, which she mentors, has received national awards from the American Chemical Society (ACS). Many students have the opportunity to volunteer locally and to attend the national ACS meetings due to Dharshi's efforts. Through her work with the ACS, Dharshi has arranged to have the prestigious Linus Pauling Award Symposium at Evergreen next year. All of these programs reflect positively on Evergreen, but they consume much of the time that Dharshi might otherwise use for research and publication. Summer support will provide her with the respite needed to pursue the research and the publication phases of professional development.

I urge the committee to fund Dharshi's grant request. The work will positively affect Dharshi's teaching and will provide new opportunities for outside recognition of the innovative teaching methods continuously under development at Evergreen.

Sincerely,

Clyde H. Barlow, PhD
Member of the Faculty

EVERGREEN

THE EVERGREEN STATE COLLEGE

Rebecca Sunderman, Ph.D. Member of the Faculty in Chemistry
The Evergreen State College ▪ Lab 1, 1013 ▪ Olympia, Washington 98505
(360) 867-6121 ▪ sundermr@evergreen.edu ▪ www.evergreen.edu

October 21, 2009

Members of the Sponsored Research Committee,

I am writing this recommendation on behalf of my amazing colleague, Dharshi Bopegedera, who is applying for a Sponsored Research Grant for the summer of 2010. As with many of the applications you've been receiving, the work being proposed here is academic, worthwhile, and worthy of being funded. There are three big things that should make Dharshi's proposal stand out to you and receive your recommendation: She has a history of student-centered involvement on campus, she is actively involved in the chemistry field regionally and nationally, and Dharshi's plan is organized and well thought out.

The chemistry club has become one of the most active student organizations on campus. As the faculty advisor she has provided many, many students the opportunity to be involved in the local community, attend national conferences, find a similar minded community on campus, and learn the skills needed to navigate the chemistry profession. Perhaps you heard through email about the chemistry club at Evergreen once again being awarded multiple, national honors by the American Chemical Society. Dharshi's proposed summer work will benefit future Evergreen students.

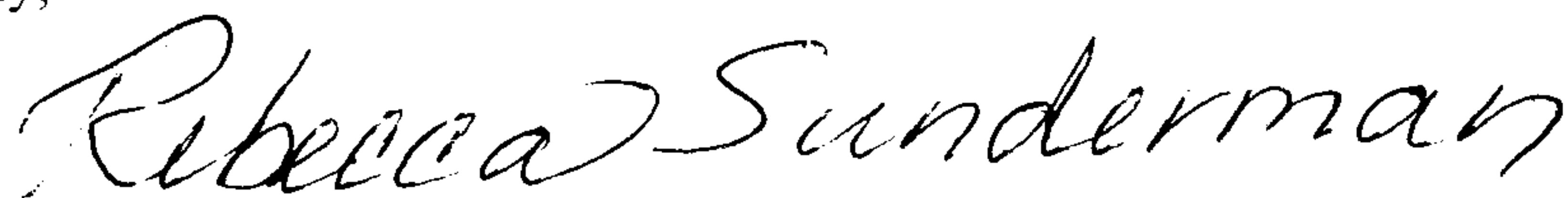
Dharshi is a past president of the Puget Sound Regional Section of the American Chemical Society. She regularly sees to it that nationally recognized speakers and events take place on the campus of Evergreen. It is with her diligence that The Evergreen State College will be hosting the 2010 Pauling Medal Award. Next to the Nobel Prize, this is one of the top awards in the field of chemistry. Dharshi's proposed summer work will enable completion of a project she started at the "Curriculum for the Bioregion" consortium, linking sustainability and chemistry. This work will add to her reputation in the chemistry education field.

Another one of Dharshi's contributions to the local community is her involvement at local schools and local libraries for hands-on chemistry events with children. Olympia, Evergreen, and the field of chemistry owes Dharshi a debt of gratitude for her passion for educating people about science. With the publications resulting from her summer work, more people will benefit from Dharshi's ideas and best practices.

The third item setting Dharshi's proposal apart is her clear demonstration of thought, placed into how she will accomplish her goals. She is not just "thinking" of doing something. She has a plan, a schedule, and multiple goals to enable the best use of her time.

I strongly urge you to consider funding Dharshi Bopegedera's application for Sponsored Research in the summer of 2010. Her planned work would benefit Evergreen, future Evergreen students, and provide Dharshi much deserved national recognition for her contributions to undergraduate education. If I can be of any further assistance, please feel free to contact me at sundermr@evergreen.edu or at extension 6121.

Sincerely,



Rebecca Sunderman, Ph.D.
Member of the Faculty in Chemistry
The Evergreen State College

(206) 866-6000 ext 6620

December 22, 1995

Barbara Smith
The Provost
The Evergreen State College
Olympia, WA 98505

Dear Barbara,

Report on Sponsored Research Carried Out in Summer 1995

I was awarded a Seed Grant from the Sponsored Research Program for the first summer session of 1992. Even before the grant became active, I visited the Perkin-Elmer Corporation laboratory in Rockville, Maryland for a training program on the Perkin-Elmer System 2000 Fourier transform spectrometer we were due to purchase in early July. This was a very informative and useful training session and I am grateful that the college provided funds for me and a science instructional technician (Peter Robinson) to attend it. Shortly after we returned, the Perkin-Elmer System 2000 Fourier transform infrared (FTIR) spectrometer was installed in the Lab I building. We had a one day on-site training on our instrument and a small celebration to "usher the instrument in". About 35 people gathered for this fun event including representatives from the Perkin-Elmer Corporation, our own science faculty, staff and students. We had a cheerful celebration over lunch.

I hired a student research assistant (Elizabeth Richards) this summer to work with me in the laboratory. During the last academic year Elizabeth was a student in my senior level chemistry program, "Atoms, Molecules and Research". I knew her to be a good student. She surprised me somewhat however by being an excellent researcher. She worked very hard all summer and learned a lot in the process. She learned the operation of the instrument well and is currently helping lab stores by teaching other students how to use the instrument. The most rewarding experience for me this summer was to see Elizabeth develop from being a somewhat reluctant and unsure undergraduate student to a confident and capable research assistant. She has decided to pursue graduate work in chemistry and I am sure the experience she had this summer will help her as she pursues her career goals.

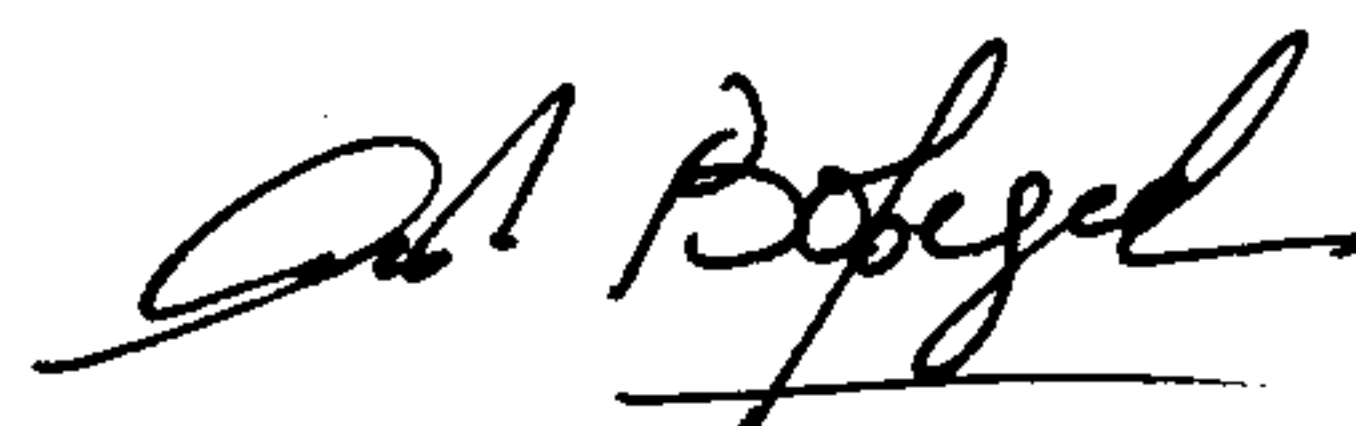
I also worked hard to get my research work underway this summer. I was delayed many times due to chemicals and/or

equipment that were not available at the college and hence had to be purchased from outside. The process that we need to go through in order to purchase anything is quite formidable and very time consuming. It is clear that the college is not yet ready to cater to a research environment. The unavailability of a glass shop and a machine shop (basic needs for any research lab) also made my task difficult. I had to get all the machining and glass work done outside the college which took up most of the summer. As a result I was not able to pursue some of the research projects I intended to work on this summer.

However, I am pleased at what I was able to accomplish. The Fourier transform spectrometer is now working and students and faculty from different academic programs can use it in their teaching and learning. I strongly believe that getting the FTIR instrument has enhanced our ability to do good quality science at TESC. This should also help us in our recruiting efforts. Further, I am now in a position to apply for outside funding with a much better chance for success. I will continue to work on the FTIR in the years to come and Evergreen students will benefit from the experience they get by doing research with me.

I wish to thank the members of the Sponsored Research Committee for awarding me the grant and for the opportunity to get a head start in my research. I look forward to future opportunities to further my research with the aid of the Sponsored Research Program at TESC.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'D. Bopegedera', written in a cursive style.

Dharshi Bopegedera, Ph.D.
(Member of the Faculty)

Report on

“Learning Chemistry by Teaching (Phases I & II)

Prepared by

**Dr. Dharshi Bopegedera
The Evergreen State College
Olympia, WA 98505**

August, 1998

The Evergreen State College
Olympia, WA 98505
Voice: (360) 866-6000 ext.6620
E-mail: bopegedd@evergreen.edu

August 5, 1998

Sandra McKenzie
Executive Director
The Evergreen State College Foundation
Olympia, WA 98505

Report on "Learning Chemistry by Teaching (Phases I & II)

During the summer of 1997, I did a series of chemistry demonstrations titled "Fun with Chemistry" for the TESC Alumni Reunion. My audience included alumni, TESC faculty, science staff and a first grade student (a faculty member's son). I was able to successfully explain the chemical principles behind each demonstration to this wide variety of individuals. I found that my audience was much more willing to learn chemistry than some of my past students! This experience prompted me to think about using demonstrations to teach chemistry.

Intending to engage my students in this teaching/learning activity, I wrote two grant proposals to The Evergreen State College Foundation titled "Learning Chemistry by Teaching" (Phase-I in the fall quarter and Phase-II in the spring quarter) to obtain funds. Both proposals were funded for a total of \$1300.

Early in the fall quarter, I did 10 interesting chemistry demonstrations for my students in the 1997/98 "Matter & Motion" program. Their assignment was to make observations and explain the chemistry behind each of the demonstrations. They were to complete this assignment individually. They did fine with the observations, but very few students explained the chemistry of the demonstrations. Therefore I required them to re-do this assignment early in the winter quarter. This time I asked them to do it in groups of three. To help them, our library liaison (Sara Rideout) took the students to the library and introduced them to the literature available on chemistry demonstrations (since our collection is minimal, I purchased several books on chemistry demonstrations and made them available to my students). Students grappled with this assignment. On the assigned day, each group explained the chemistry of the demonstrations to the rest of the class in an oral presentation. This was a great learning experience for my students. They had to learn the chemistry and explain it using the chalkboard. The students went home that day having learned quite a lot of chemistry and some important teaching skills.

Once this task was accomplished, I asked each student to pick 5 demonstrations to present to a high school student audience. Each student did this using library resources. Then working in their groups of three, they prioritized the demonstrations. Then they made lists of the chemicals and lab supplies they would need for the demonstrations. These tasks were accomplished in the winter quarter.

Over spring break, I worked with our science instructional technician (Peter Robinson) to determine the viability of these demonstrations. We paid attention to availability of chemicals and lab

supplies, nature of the chemicals (particularly toxicity), complexity of the demonstrations and time required for the demonstrations. Based on these factors we rejected or accepted the demonstrations.

When students returned in the spring quarter, I gave them this feed back. During the first four weeks they acquired the chemicals and supplies for their demonstrations. They were required to fill out the chemical requisition forms in the lab stores for this purpose. This involved reading the Material Safety Data Sheets for each of the chemicals (a valuable learning experience). Some chemicals had to be ordered (students learned how to do that too). They also learned how to properly dispose the chemicals they were using (another valuable learning experience). During the fifth week we spent two days testing out the demonstrations. Based on this, each student selected one demonstration they would present. Working in groups of three, they also designed a hands-on mini-lab for high school students.

During the next three weeks students continued to practice and perfect their demonstrations and mini-labs. Students were also required to write a dialog they would use when presenting the demonstrations and to describe the chemistry behind the demonstrations. These two assignments ensured that the students had a good understanding of what they were expected to do on the day the high school students arrived.

Working with Louis Nadelson, one of our part-time faculty members who is also a physics teacher at the Capitol High School, I was able to arrange for two high school classes to visit TESC. Once this plan fell into place our students got very excited about being the “hosts”. They were asking me questions like “will the high school kids wear goggles in the lab?” (music to my ears since I am always emphasizing the need to wear goggles in my lab), “will they be bored?” (music to my ears again since sometime I see yawns in my lectures!), and “how can we keep them engaged in what we are doing?” (I was delighted to see them thinking about teaching techniques to keep their audience interested).

During the eighth week of the spring quarter we had a “dress rehearsal”. We pretended like we had our audience. This was very helpful in determining the overall time required, the most logical sequence for the demonstrations and other such details. It was also a great experience for my students to see how well (or poorly) prepared they were for the “chemistry day” (as we decided to call it).

Students prepared posters to discuss the chemistry behind their demonstration. It was my intention that the “chemistry day” be an opportunity to teach and learn chemistry rather than a magic show. The director of the Computer Applications Lab (Porsche Everson) conducted a workshop on Microsoft Publisher, a software package that is specially designed for the preparation of posters. Students prepared amazingly attractive posters. Their contents were checked for clarity and accuracy. When the first “chemistry day” arrived on Wednesday of the ninth week of the spring quarter, we were all ready for our audience.

Louis Nadelson from the Capitol High School brought his senior class for our first chemistry day. We started off really well doing a flame test demonstration. It went so well that the fire alarm in the building went off! We had to stop our activities while the fire Marshall cleared the building for us to re-enter. What a great way to announce “chemistry day” to the TESC community! The rest of the demonstrations went well as planned. My students were confident and calm, did their presentations well, kept their audience engaged, answered their questions well and were great examples of the model TESC student we all want to show to the world.

We had an open house lunch. Several members of the TESC community joined us for lunch, President Jane Jervis and Dean of Student Services Art Costantino, among them. In the afternoon my students conducted hands-on mini-labs. These labs were a great hit among the high school students as well as their teacher. When we were done for the day we were exhausted but exhilarated. It was one of the best days of my teaching life!

Our second “chemistry day” was on Friday of week nine. Bruce Montgomery of the Capitol High School brought his International Baccalaureate chemistry class (high school freshman) to be our

audience. This day too was as successful as the first. Once again we were exhausted but exhilarated at the end of the day.

This experience was one of the best in my teaching career. When I planned it in my mind at the beginning of the year, I felt quite nervous about handing over the responsibility of doing the demonstrations to my students. I learned that with careful planning, solid training and high expectations, students do rise to the occasion. At the end of the spring quarter, we discussed our year's experiences as a class. Without exception the "chemistry days" were the most memorable in the students' minds. They talked about what a valuable learning experience it was for them and that they were fortunate to have had the opportunity. This sentiment appeared over and over again in all of their self-evaluations. By hosting "chemistry day" students had learned:

- a lot of chemistry and lab skills
- to work collaboratively with others
- to prioritize their many tasks
- to take responsibility for their actions
- teaching skills
- presentation skills

I am pleased and proud that "chemistry day" was so successful. I am hopeful that as a result of this many Capitol High Schools students will join TESC as science students. I have encountered some of these students in town and they have stopped me to say that they attended "chemistry day" and they thoroughly enjoyed it. The two teachers made solid connections with me and wrote back to express their gratitude for giving their students a positive experience. They said that all their students wanted to pursue further studies in chemistry after attending "chemistry day". For me that is the best complement of all.

I documented the events of the two "chemistry days" on film. Attached please find photographs of this event.

The "Matter & Motion" program budget was not sufficient to cover the cost of all the chemicals and supplies we needed for this project. I am grateful to The Evergreen State College Foundation for providing the funds that made this project possible. I was also delighted to receive funds from other members of the TESC community for the open house lunch. My experience has encouraged me to continue this project in the future and I am hopeful of continued support by The Evergreen State College Foundation.

I wish to say a special thank you to Sandy McKenzie and Helen Stoutnar for answering my questions and providing valuable information when requested.

Yours sincerely,



Dharshi Bopegedera, Ph. D.
(Member of the Faculty, Chemistry)

A Sponsored Research Report

on

**Writing Articles for Publication in the
*Journal of Chemical Education***

Prepared by

**Dr. Dharshi Bopegedera
The Evergreen State College
Olympia, WA 98505**

September 2003

To: Don Bantz, & Members of the Sponsored Research Committee
From: Dharshi Bopegedera 
Regarding: Sponsored Research Report

I was fortunate to receive a Sponsored Research Grant during the summer of 2003, which provided me the opportunity to write two publications to the Journal of Chemical Education.

The Journal of Chemical Education, which is owned and published by The Division of Chemical Education of the American Chemical Society (ACS), is the most respected journal in chemistry education. I have subscribed to this journal for decades and read it quite religiously. It helps me keep up on issues pertaining to chemistry education, learn about new approaches to teaching, and find labs I can adopt into my classrooms. It is certainly the best journal for college chemistry educators.

I spent much time this summer reading through the Journal of Chemical Education's guidelines to authors. This was necessary since I have not submitted an article to this journal before. Then I prepared two articles for publication. These articles are titled:

- **“Light” - An Interdisciplinary Teaching/Learning Experience**
- **Hosting a “Career Week” for Chemistry Majors**

“Light” - An Interdisciplinary Teaching/Learning Experience

This article describes my experience of designing and teaching an interdisciplinary program titled “Light”, with Susan Aurand during the 1998/99 academic year. I discussed the goals of the Light program, texts used, laboratory work, art studio work and other course activities emphasizing how light was used as a theme to make connections between science (chemistry in particular) and art. I described how we designed student presentations on “cross-cultural celebrations of light”. The paper also talked about how we accomplished students' desire to study various aspects of light by using interdisciplinary independent projects. Finally, a sample lab, describing the use of visual approaches to help artistically inclined students learn scientific concepts, was discussed in detail.

Hosting a “Career Week” for Chemistry Majors

This paper describes my experience of conducting a “Career Week” in the “Atoms, Molecules and Research” program during the past several years. The goal of “Career Week” is to provide my students with information about career options in chemistry. The schedule of a typical Career Week and the involvement of the college Career

Development Center is described in detail. The impact of Career Week is assessed by providing student responses to this activity and the percentage of students who have pursued graduate studies in chemistry during the past ten years. Suggestions for hosting a similar activity at other institutions are also discussed.

I submitted the ““Light” - An Interdisciplinary Teaching/Learning Experience” article to the Journal of Chemical Education this summer.

I have completed the writing of the article on “Hosting a “Career Week” for Chemistry Majors” although I am still working on the final stages of editing. I am planning to submit this article to the Journal of Chemical Education within a month.

I have attached copies of the above two articles. Please note that the article on “Hosting a “Career Week” for Chemistry Majors” is not in its final version.

I am delighted that I had the opportunity to accomplish this work this summer. I certainly could not have done so without the support of a Sponsored Research Grant. I am planning to write several more articles to the Journal of Chemical Education in the near future. I hope that I will continue to receive support from the Sponsored Research Grants to help achieve my goals.

I wish to express my sincere gratitude to the members of the Sponsored Research Committee for their favorable response to my Sponsored Research Proposal.

Thank you.