To: All BMCC Faculty  
From: Kay Conway  
Chair of the Faculty Development Committee of the BMCC Academic Senate  
Date: November 17th, 2015

GENERAL INFORMATION

Description:  
The purpose of the BMCC Faculty Development Grant is to support full-time and part-time faculty members in their scholarship. All faculty throughout the college are encouraged to apply. The maximum grant award is $5,000 and a maximum of twelve grants will be awarded. A final report describing the finished research product and a presentation must be completed according to the timeline indicated below.

Timeline:

February 1, 2016: 5 PM Deadline for completed applications sent via email to academicaffairs@bmcc.cuny.edu. Late applications will not be accepted.

April 15, 2016: Notification and distribution of grant awards.

April 15, 2017: Completion date. Presentation in the Center for Excellence in Teaching, Learning, & Scholarship must be scheduled no later than May 1, 2017 for the Fall 2017 semester. The CETLS Director will contact the winners to schedule. Publications resulting from the research should acknowledge the grant and a copy should be submitted to VP Karrin Wilks. You are also encouraged to submit published works to the BMCC Institutional Repository (http://lib1.bmcc.cuny.edu/services/repository.html).

Eligibility Requirements:

☐ I am a full-time faculty member, or an adjunct who will have eight semesters of service at BMCC as of September 2016.

☐ For the proposed project, I have not received or applied for any other BMCC or CUNY grants/funds, nor have I applied for or received funding from any outside source (including PSC CUNY).

☐ The project proposed is within the guidelines, policies, and restrictions of the IRB and copyright laws.

☐ I have no other work-related commitments that conflict with this research during the grant period.

☐ I did not receive a BMCC Faculty Development Grant in 2014-2015 or 2015-2016.

☐ I agree to observe the requirements indicated in the timeline above.
Proposal Package:
Please submit the following material electronically by 5PM on February 1, 2016 to academicaffairs@bmcc.cuny.edu:
☐ Completed Signature Form
☐ Curriculum Vitae
☐ Abstract (100 words) briefly describing the project
☐ Proposal (3-5 pages): a well-organized description of the project, single-spaced in 12-point Times New Roman font. Include the following sections:
  1. Project Narrative (2-3 pages maximum)
     • Discuss the purpose and overall significance of the project (should include a review of the literature)
     • Evaluate its potential contribution to your field
     • If appropriate, a detailed description of methodology and overall design
     • Indicate how the project serves your own professional development and benefits the BMCC community
     • Identify a scholarly venue for publication or exhibition of the completed project that is recognized by your department, discipline, and peers
     • If the work for which you seek funding is conceived of as part of a larger project, describe your progress on the latter and indicate how the summer-funded work articulates with that project
     • If there are multiple authors, explain each person’s responsibilities
     • Indicate if permissions, copyright releases, licenses, IRB, or other authorizations are necessary to execute the project
     • Be jargon-free and comprehensible to a general audience
  2. Timeline: Include a development plan with a completion date no later than April 15, 2017. If IRB approval is necessary, indicate deadlines. Note, no funding will be provided until after IRB approval.
  3. Itemized Budget: The maximum grant is $5,000. This may be awarded as a summer stipend or for material expenses incurred in research and creative work. Provide a justification of the budget, explaining how the stipend will be used to support the project. If equipment is purchased, it will be paid for directly by BMCC and will become the property of BMCC. If the proposal is a joint one, stipulate how the money will be divided.
  4. Bibliography (if appropriate)
☐ Supporting Materials (may include published articles and/or reviews of creative work)

Applications will be evaluated based on a rubric, which is attached as an Excel file. The goal will be for each project to be evaluated by two reviewers, one internal to BMCC and one external to BMCC but internal to CUNY. Attached separately is the Reviewer Score Sheet so you are aware of the evaluation criteria. Do not complete or submit the score sheet. The application cover sheet is on the next page. Additional information including Frequently Asked Questions, recent recipients, and samples of previous applications follows. If you have additional questions, please contact Professor Kay Conway at kconway@bmcc.cuny.edu.
BOROUGH OF MANHATTAN COMMUNITY COLLEGE
FACULTY DEVELOPMENT GRANT, 2016-2017

SIGNATURE FORM

I certify that I meet all eligibility requirements and have followed all instructions for assembly and transmission of the proposal package.

Project Title: __________________________________________________________________
_____________________________________________________________________________

Name (Print): _________________________________________________________________
Department: __________________________ Rank: __________________________

☐ Tenured or CCE
☐ Untenured
☐ Adjunct

Email: _____________________________________________ Phone: _________________

Signature of Applicant: __________________________ Date: ______________

Signature of Department Chair: _________________________ Date: ______________

Chairs’ Suggestions for Reviewers:
Internal ______________________________________________________________________
Internal ______________________________________________________________________
External ______________________________________________________________________
External ______________________________________________________________________

Check category most aligned with your research focus (to ease sorting process and assignment to reviewers)
☐ STEM (Science, Technology, Engineering and Mathematics)
☐ Humanities
☐ Social Sciences
☐ Career
☐ Pedagogy: Scholarship of Teaching & Learning
☐ Other
Frequently Asked Questions

1. Can the applicant use the funding to purchase tax-exempt equipment for the project? How does it work if applicable?

*If the faculty member would like all or part of the funding to be used to purchase equipment, this should be indicated in the budget section. Equipment will be purchased by, and become the property of BMCC, and that portion of the funding will not be included in the taxable income of the recipient.*

2. Is a Co-PI allowed in the grant application? How will the funds be distributed?

*Yes, faculty may apply jointly for funding. One application should be submitted and the project narrative should be clear about each faculty member’s contribution to the project and should include a discussion of each faculty member’s professional expertise, contribution to their growth etc. The budget should indicate how the resources will be allocated. Two CV’s should be submitted.*

3. Can the applicant use the funding for travel purposes, either to conduct research or to disseminate outcomes etc.?

*Yes the funds may be used to collect data or for dissemination, however, faculty should consider whether or not travel funds (applied for separately) might be better used for attending conferences, making presentations etc.*

4. Can the applicant propose a brand-new study without prior experience?

*Yes but the reviewers will be trying to assess whether or not the faculty member has the expertise and the experience to complete the project. Faculty members should demonstrate how past work has prepared them for the new line of inquiry or new creative project, and/or how they have developed the skill set necessary to complete the project. Reviewers will consider past publications and grant awards, on unrelated topics, as evidence of the ability to complete new projects.*

5. Does the funding mainly support summer research?

*Yes many faculty have chosen to use the funds for summer pay in the past, but funds have also been used to purchase lab equipment. This year the option to hire research support has been added.*

6. Can the PI use research funds to pay student assistants?
Yes funds may be used for research assistants. Again this should be outlined in the budget (and should make clear what type of assistant will be hired (educational level, experience, expected pay, expected hours) and this should also be evident in the timeline. Proposals that support the hiring of BMCC students, will be given additional consideration.

7. Can funds be used to purchase a computer, an Ipad, or other electronic devices?

Yes funds may be used to buy lap tops etc. but faculty will need to demonstrate why the equipment is essential to the project.

8. Are preliminary results required for a successful application?

No. However if faculty have already completed earlier stages of the project this strengthens the case that the faculty member is capable of continuing or completing the project. There is an expectation that the funds provided will lead to completion of an outcome (a publication, a presentation, a creative work).

9. Do tenured faculty receive priority? Do full time faculty receive priority?

No and no.
Recent Recipients:

2015-2016:

- **Silvia Álvarez-Olarra** Temporality and Identity in a Slide Motion Film: The Case of “Año uña” (2007)
- **Valerie Thiers-Thiam** Resilient Women in Francophone Literature
- **Soniya Munshi** From Exception to Center: Carceral Feminisms, immigration enforcement and the figure of the immigrant domestic violence victim-survivor
- **Marjan Persuh** The role of automatic processes in behavior
- **Paula Saunders** The History and Economy of Dougalston Estate in Grenada
- **Egit Esin** Generation 1980: Self and subjectivity among middle class women in Istanbul, Turkey
- **Timothy Keane** Defining the Ecstatic Autobiography
- **Elizabeth Wissinger** The Gendered Dimensions of Wearable Tech
- **Roger Foster** Finance, Neoliberalism and Social Character
- **Christine Jacknick** Space for Learning: Examining Classroom Discourse
- **Sarah Haviland** “Conference of the Birds: A Walk-In Sculptural Aviary”
- **Chiaki Yanagisawa** “Development of Image Analysis Method for Super-resolution Microscope”
- **Shanti Rywkin** “Confocal Raman Microscopy Studies of the Interaction of Phenothiazine Coated Gold Nanoparticles with Breast Cancer Cells”
- **Sarah Salm** “Isolation and Characterization of Heavy Metal Tolerant: Bacteria from Contaminated Water”
- **Mariya* Komolova** “Adolescent Autonomy Development in Immigrants from former Soviet Union”

2014-2015

- **David Bahr**, “Teaching the graphic narrative in the multi-cultural community college AND Photo graft: Revision, reclamation, and the graphic photo”
- **Francesco Crocco** “All work and no play: The absence of play in representations of Utopia”
- **Erik Freas** “Muslim-Christian relations in Palestine during the British Mandate Period”
- **Amy Sodaro** “Berlin's contested pasts: History and memory in the sites of the perpetrators”
- **Jun Rice** “Connection between heat stress and muscle aging in nematode”
- **Sheila Fells** “Medication administration and math for nurses: An educational gap or quantitative literacy gap?”
- **John Beaumont** “Elective formative peer observation”
- **Sharon Avni** “Hebrew language learning ideologies and the debate over Hebrew language charter schools”
- **Lisa Grace** “Do health messages in preschool shows vary based on gender and/or ethnicity?”
- **Maria Donoso Macaya** “Variations of Frida: Graciela Iturbide, Mario Bellatin, and La Chica Boom”
SAMPLE APPLICATION #1

March 2015

From Exception to Center:
Carceral Feminisms, Immigration Enforcement, and the
Figure of the Immigrant Domestic Violence Victim-Survivor

Abstract
I propose to use the Faculty Development Grant to develop my current research into an article for publication. This article will examine the implications of the criminalization of domestic violence on immigrant victim-survivors by offering an analysis of the relationship between local, state, and federal policies emerging from feminist advocacy efforts to protect survivors of domestic violence and laws that regulate immigrant communities. This research will also be included in a book-length manuscript that explores the racial politics of anti-violence advocacy work in New York City (1980-present) by focusing on discourses about the criminalization of domestic violence in minoritized communities.
From Exception to Center: Carceral Feminisms, Immigration Enforcement, and the Figure of the Immigrant Domestic Violence Victim-Survivor

Project Narrative

I am applying for a Faculty Development Grant to develop a section of my current research into an article for publication. This article will examine the implications of the criminalization of domestic violence on immigrant victim-survivors by offering an analysis of the relationship between local, state, and federal policies that emerge from feminist advocacy efforts to aim to protect survivors of domestic violence and laws that regulate immigrant communities. I will demonstrate how the gaps between these policies produce particular challenges for victim-survivors who do not have secure citizenship status. Support from this grant will allow me to conduct additional policy research and analysis to provide a socio-legal historical context for empirical research I have already conducted with community-based organizations that work on responses to gender-based violence in immigrant communities.

This article is part of a larger research project. I am currently working on a book-length manuscript project that explores the racial politics of anti-violence advocacy work in New York City (1980-present) through a focus on discourses about the criminalization of domestic violence in minoritized communities. In this project, I take South Asian communities in the U.S. (made up of people descended from Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka) as a case study through which to understand the intersectional relationships between race/ethnicity, gender/sexuality, class, religion, citizenship, and dynamics of policing and surveillance. I situate the story of South Asian community-based work within the context of New York City racial politics to look at the role that advocacy premised on culture, and the cultural-specificity of the victim-survivors’ needs, plays in debates about policy solutions that respond to intimate violence. This research project utilizes ethnographic research of local anti-violence organizations; policy analysis of local, state and national legislation; archival study of local coalition work; and a close analysis of selected legal cases to offer a sociological history of how discourses of criminalization of domestic violence have produced understandings of safety and violence in minoritized communities in New York City.

This research project grows out of my dissertation, “Negotiating Violence, Navigating Neoliberalism: Domestic Violence Advocacy Efforts in South Asian Communities in Post-9/11 New York City.” My dissertation research was concerned with the evolution of anti-violence work in South Asian communities, which, over the last three decades, has become one of the most institutionalized forms of activism among these groups. My dissertation examined responses to gender-based violence to understand the relationships between state institutions, non-profit organizations, and South Asian immigrant and diasporic communities within a context of neoliberal capitalism, multicultural feminism, and post-9/11 anti-terrorism discourses. This study was based in data collected through multiple qualitative research methods such as policy and budget analysis of anti-violence legislation, in-depth interviews with leaders in South Asian community-based organizations, content analysis of informational materials about domestic
violence in South Asian American communities, and, ethnographic participant-observation of relevant public events and activities.

In reading anti-domestic violence activism through the relationships between state policies and localized responses, I illuminated the complexities that community-based organizations face in their everyday advocacy practices with South Asian survivors of domestic violence. Underlying this exploration was focused attention to internal differentiations of vulnerability to institutional violence in South Asian American communities—based on religion, sexuality, immigration status, and class—and how these dynamics are addressed and/or avoided in community social change work. I was particularly interested in how post-9/11 policy initiatives affected advocacy strategies for victim-survivors of domestic violence that were at risk for detention or deportation.

These internal differentiations of vulnerability were most visible through exploration of the impacts of the criminalization of domestic violence, institutionalized through the passage of the Violence Against Women Act in 1994. For communities who are in insecure positions with the state because of their social location (e.g. racial identity, class position, citizenship status), the criminalization of domestic violence can produce variant outcomes, including additional harm. For these victim-survivors, interactions with state institutions may not be or feel safe. Thus, calling state agents, such as the police, or participating in criminal legal processes, such as the prosecution of an abusive partner, entails risk. At the same time, participation in criminal legal processes where authoritative evidence, such as police reports, legitimates the experience of victim-survivors can serve as an essential entry point to access public assistance and other social services.

Victim-survivors that are minoritized due to race/ethnicity, gender/sexuality, class, and/or citizenship status grapple with these complex risk assessments, gauging possibilities of safety and violence in their intimate relationships as well as relationships with state institutions (Bhuyan 2006). Community-based advocacy efforts are positioned to negotiate these complicated dynamics between the state and victim-survivors of intimate violence. My book project takes up concerns about the impact of criminalization of domestic violence and widens it, to locate these dynamics in South Asian communities within a larger historical context of debates about policing and surveillance in the anti-violence movement in New York City.

A critical finding in my research thus far concerns the role that culture has played in anti-domestic violence work in South Asian immigrant communities. Culture has been a terrain of struggle for Asian immigrant communities (Lowe 1996), and South Asian feminist scholars have contributed new understandings of the relationship between culture, gender, and violence (Das Gupta 2005). Engaging assumptions about culture has been a significant part of anti-violence scholarship and/or activism in South Asian communities in the U.S. from its onset. The assertion of the culturally-specific needs of the South Asian victim-survivor has worked to intervene in essentialist ideas about patriarchy in South Asian communities. It has also served to interrupt dominant constructions of a universal experience of domestic violence that is devoid of cultural context. Anti-violence advocacy has grown steadily through a platform of cultural-specificity, in which a premise of shared culture is the mode through which South Asian women’s needs, experiences, and life conditions are articulated. Scholarship and advocacy that focuses on the unique culturally-specific needs of South Asian women has helped produce a vehicle through
which attention can be afforded to this population. Culture, thus, becomes the methodology for this work.

I argue that an emphasis on unique cultural factors obscures structural concerns that South Asian immigrant communities face when interacting with state institutions, particularly the criminal legal system. Cultural frameworks have become a way to manage complexities of structural inequality, racism, and conditions of insecurity. There has been a gap in attention to both the technologies of state-sponsored racism that differentially impact people within South Asian communities as well as across racialized populations.

My project, thus, links issues of intimate violence with institutional violence, such as law/policy that increase policing/surveillance of immigrant communities. These connections are already being made by academic researchers who work on the intersection of issues of mass incarceration, crime control and domestic violence law (e.g. Alexander 2006; Richie 2012), though Asian communities are generally not included in this body of research. Meanwhile, scholarship about intimate violence in South Asian immigrant communities (e.g. Dasgupta and Warrier 1996; Raj and Silverman 2002) has not addressed the role that criminalization of domestic violence plays in these experiences, and, in particular, has not examined the risks that face community members who are already at risk for institutional violence. My research expands our understanding of the implications of living in the United States as part of a minoritized population. This research contributes to academic dialogue in Sociology, Urban Studies, Ethnic Studies, and Women’s and Gender Studies/Feminist Criminology as well as to public sociological conversations about violence against immigrant women.

I am requesting support from Faculty Development Grant to research and write an article for publication in Signs: Journal of Women in Culture and Society, an internationally-renowned interdisciplinary peer-reviewed journal. This article will offer a socio-legal history of policies that have shaped public institutional responses to domestic violence to show the particular obstacles faced by immigrant victim-survivors whose citizenship is not secure. I will also offer two case studies that showcase alternative strategies being implemented by two different NYC-based efforts working with immigrant victims-survivors of domestic violence: Sakhi for South Asian Women, a community-based organization, and Anti-Violence Advocates Against Deportation, a citywide coalition.

This article will build from empirical research that I have already conducted. However, I will hold follow-up interviews with selected leaders in these two organizations. I am preparing my IRB application, to be submitted by April 15, 2015.

My research is directly relevant to the BMCC community, as I look at the ways that social policies shape the experience of minoritized communities living in New York City. My work lifts up the stories that are often made invisible because they are outside the dominant narrative. I am eager to find more opportunities to share my work with students, faculty, staff, and others. I am in my second year at BMCC and support through the Faculty Development Grant will help me in growing and disseminating my scholarly work. The research for this article will be included as a chapter in my book manuscript so this grant will indirectly support the advancement of this larger project as well.
Timeline

April 2015  Submit IRB Application (by April 15, 2015 submission date);
Continue research on social policies (to expand upon research
already
completed);
Present conference paper at the Critical Ethnic Studies Association
Annual Meeting. Here, I will present my research on the case studies
and expect to received helpful feedback that will shape my final
draft.

May 2015  Continue research on social policies;
Present conference paper at Law and Society Annual Meeting.
Here, I will present research on social policy and expect to receive
constructive feedback.

June-July 2015  Continue research on social
policies; Conduct follow-up
interviews.

August 2015  Write/complete draft of article.

October 2015  Revise draft and prepare for submission.

November 2015  Submit article to Signs: Journal of Women in
Culture and Society

February 2016  Present research/publication.

Budget

Summer Stipend to support research and writing   $3,000

TOTAL   $3,000

WHAT FOLLOWED AT THIS POINT BUT WERE OMITTED HERE WAS THE
BIBLIOGRAPHY AND AN EXTENSIVE CURRICULUM VITAE
SAMPLE APPLICATION #2
BMCC FACULTY DEVELOPMENT GRANT 2012-2013

When Gold Is Not Noble Anymore:
Synthesis and Reactivity of Nanostructured Gold Surfaces

Abstract

Gold is generally considered a chemically inert and non-reactive noble metal, but depending on its surface structure, gold exhibits chemical and physical properties which are completely different from the closely packed smooth surface. Gold catalysts, in the form of dispersed nanosized supported gold clusters, exhibit unusual chemical reactivity, which must be attributed to the structure and electronic properties of the gold nanoparticles. In order to study the relationship between surface structure and reactivity, we intend to synthesize nanostructured gold surfaces and investigate their chemical reactivity for the activation of carbon dioxide and other molecules relevant to energy and environment.
Project Description

Catalytic reactions are an essential part in virtually all chemical technologies and biological processes. The catalytic effect of metals is based on two factors - the electronic properties of the metal and the surface structure of the catalyst. Gold is generally considered a chemically inert and non-reactive noble metal, but depending on its surface structure, gold exhibits chemical and physical properties, which are completely different from those of the smooth closely packed surface. In catalysis, gold has received recently attention due to its high reactivity in low temperature catalytic reactions (1). This unusual reactivity must be attributed to the electronic properties and surface structure of catalysts, which usually consist of dispersed nanoparticles. In contrast, surface science studies suggest that the smooth, close packed Au(111) surface exhibits little chemical reactivity (2-4). The unusual chemical reactivity of gold nanostructures has led to interest in a multitude of areas beyond catalysis, e.g. in biomedical applications (5). A complete understanding of the underlying structure-reactivity mechanism requires the controlled, reproducible synthesis of nanoparticles or nanostructured surfaces combined with structural characterization methods at nanoscale resolution.

In the proposed project we aim to explore / develop a new method for synthesizing reproducible nanostructured gold substrates, which allow us to control the structures from the nanometer to the submicron scale.

In the first part of this project, we intend to apply a recently developed method to produce nano-sized surface defects by using ion etching, i.e. sputtering the surface with high-energy noble gas ions (argon or neon). This method permits to produce well-defined surface defects in the shape of hexagonal vacancy islands (pits) on single crystal Au(111) surfaces (see Fig. 1 below). Characterization of these surface structures on a nanoscale is performed with Scanning Probe Microscopy Techniques (SPM). Based on preliminary results described below, we expect to control the size and shape of the islands as a function of ion etching conditions - exposure time, ion energy and incident angle of the ion beam.

In the second part, we investigate the reactivity and stability of select nanostructures on Au(111) surfaces (high vs. low defect density), i.e. their capacity for adsorption and bond activation of molecules relevant to energy and environment (CO₂, CO, H₂ and H₂O). The activation of carbon dioxide is of particular interest due its environmental relevance and its role in the synthesis of liquid fuels from CO₂ + H₂O (6).
It is well known that none of these molecules adsorb on the smooth Au(111) surface, even at low temperature (with exception of H₂O). The present understanding is, that low coordination sites on gold, i.e. surface step and kink sites, are chemically more reactive than the highly coordinated sites of the smooth Au(111) surface (7). Since the first step in these reactions involves most likely the adsorption of the molecular reactants (Langmuir- Hinshelwood mechanism), step sites are thought to play an important role in activating these reactions. Therefore, well-characterized, stable model catalysts based on nanostructured Au(111) surfaces are expected to play an important role in understanding the mechanism of these reactions on supported gold catalysts. An equally important aspect of these reaction studies will be to determine the structural stability of the surface under reaction conditions (4) through characterization with Scanning Probe Microscopy.
Techniques - Scanning Tunneling Microscopy (STM) and Atomic Force Microscopy (AFM).

The specific questions we intend to answer are:

1. Can we **synthesize nanostructures on Au(111) surfaces with ion etching**, which allows us to control the size and structure of surface defects on a nanoscale?

2. What are **reactivity and stability of these nanostructured Au(111) surfaces** towards molecules relevant to energy and environment (CO₂, CO, H₂, H₂O)?

Preliminary Results
In preliminary work performed at Brookhaven National Laboratories, we have produced nanostructured Au(111) surfaces by ion beam etching of clean, well-ordered single crystal Au(111) surfaces. After characterization of the smooth Au(111) surface, the surface was subjected to short 1 keV Neon ion sputtering intervals at elevated temperatures. Images obtained with Scanning Tunneling Microscope (STM) demonstrate that this procedure results in nanosized hexagonal vacancy islands (pits), shown in Fig. 1.

![STM images of the Au(111) surface after ion etching](image)

**Fig. 1:** STM images of the Au(111) surface after ion etching show hexagonal vacancy islands with average pit "diameters" of ~20 nm. The 3D-image at left shows details of the pits, which have an "inverted pyramid" structure and depths of ~10 atomic layers (each surface step represents an atomic layer).

Variation of the sputtering conditions, such as the number and length of the sputtering cycles, should allow us to reproducibly control the size and depth of the pits. Larger pit sizes increase both the depth of the pits (1 to 10 atomic layers) as well as the length of the monoatomic steps.
Experimental Method

Experiments will be performed in collaboration with Dr. Jan Hrbek at the Chemistry Department at Brookhaven National Laboratories (BNL) and the Center for Functional Nanomaterials (CFN) at BNL. Synthesis and characterization of the nanostructured Au(111) surfaces will be performed in a Ultra High Vacuum Chamber (UHV) equipped with a Scanning Tunnel Microscope (STM), an Ion Sputtering System and other surface probes. Chemical reaction studies will be performed in a separate UHV chamber, which contains facilities for vibrational spectroscopy with Infrared Reflection Absorption Spectroscopy (IRAS), an Ion Sputtering System and other surface spectrosopies. Additional surface characterization to determine the stability of the surfaces at ambient pressure, will be performed with an Atomic Force Microscope at CFN.

Relevance of Work / Benefits

Relevance to Surface Science and Catalysis
This work is part of a larger effort to characterize the structure-reactivity relationship of metals at the nanoscale, and will eventually aid in the development of better catalysts for the activation of carbon dioxide and other molecules relevant to the environment (greenhouse gases) and energy (sustainability).

Professional Development and Benefit to Students
This work will enable me to collaborate with outstanding scientists (Dr. Hrbek and others) and perform research with state-of-the-art equipment at Brookhaven National Laboratories. This will in the end benefit my research and teaching at BMCC. Even though the proposed work will be carried out at BNL, the experience gained there will benefit our research here at BMCC. We are currently acquiring an Atomic Force Microscope at BMCC and plan to continue research with undergraduate students after the new instrument is operational (Fall 2012). Undergraduate students will have the unique opportunity of using state-of-the-art equipment to gain "cutting edge" research experience in nanoscience.

Publication
We intend to publish the proposed research in Journal of Physical Chemistry or Surface Science.

Timeline
- July/August 2012: Experimental work at BNL (4-6 weeks).
- Fall 2012: Preparation of manuscript for publication.
- January 2013: Submission of manuscript and final report. March 2013: Presentation at the Center of Excellence in Teaching, Learning and Scholarship

Budget:
Summer Stipend: $3000
The stipend will be used for summer research at BNL (4-6 weeks).

WHAT FOLLOWED AT THIS POINT BUT WAS OMITTED HERE WAS THE BIBLIOGRAPHY AND AN EXTENSIVE CURRICULUM VITAE