



DISCOVERY DAY

Tips for
Successful Posters

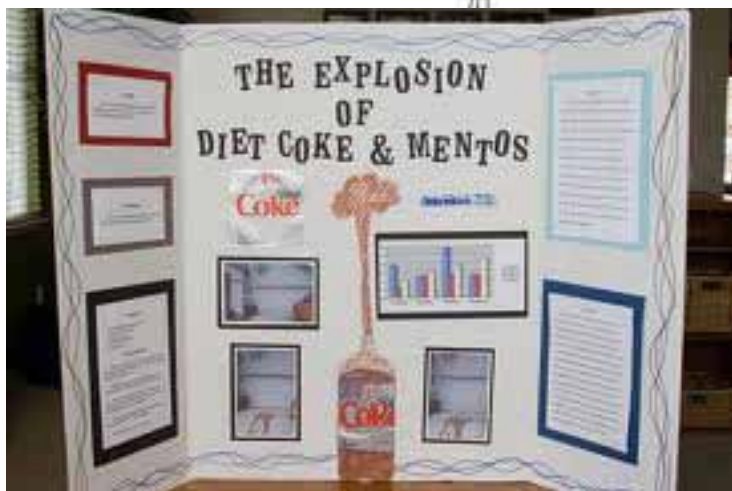


What do we mean **POSTER SESSION?**



NOT this...

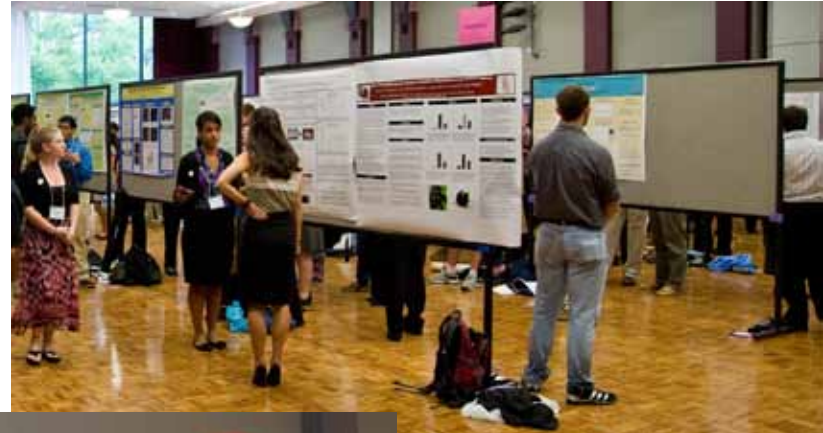
UNIVERSITY OF SOUTH CAROLINA





But THIS...

UNIVERSITY OF SOUTH CAROLINA





See it for yourself:

View the
Discovery Day video

Coming soon!



How To: General Overview



A successful poster...

- conveys a **clear message**,
- by **high-impact** visual information,
- with **minimum** text

...grabs attention!



A great poster is...

- **Readable** – use clear language and good grammar in all poster text
- **Legible** – all poster text should be readable from 5 feet away
- **Well-organized** – group items logically and visually for maximum impact
- **Succinct** – you have 10 seconds to grab your audience's attention



Overview: Content

Remember: Do **NOT** duplicate the full text of your work **on** your poster.

Hit the high points!

Provide handouts for more information.



Overview: Content - *OPTION 1*

Sections you may wish to include: (will vary depending on your desired message)

- Introduction, background, or overview
- Hypothesis (Question you explored)
- Motivation or purpose (Why you did it)
- Methods (How you did it)
- Results (What you found)
- Conclusions (What you learned)
- Significance (What it means)
- Future plans or next steps
- References (Works cited)
- Acknowledgements

Abstract is not needed!



Overview: Content - *Option 2*

Sections you may wish to include:

(will vary depending on your desired message)

- Introduction, background, or overview
- Activity/Event description (What you did)
- Motivation or purpose (Why you did it)
- Reflection (What you learned; What was the impact on you)
- Significance (What it means; what you want others to learn/know from your experience)
- Future plans or next steps
- References (Works cited)
- Acknowledgements

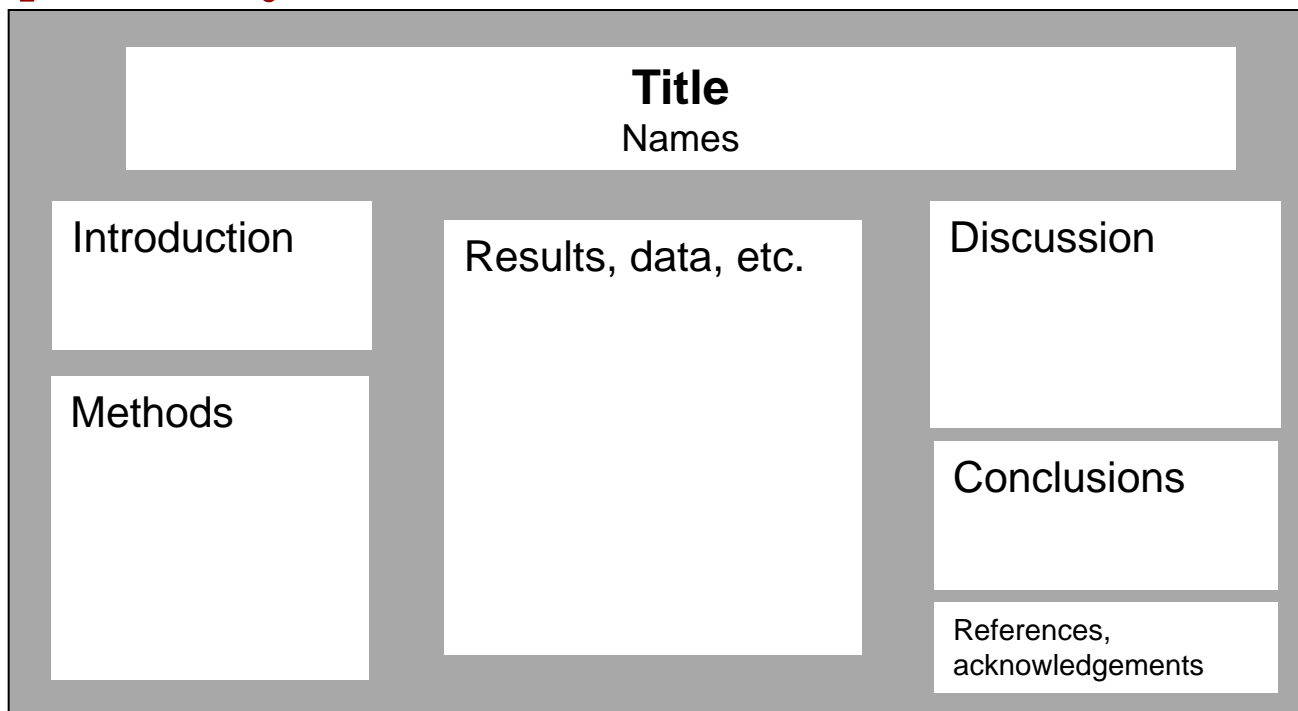


Overview: Layout

People take in information according to a known spatial sequence.

Capitalize on this and use it effectively!

Expected layout (3-4 columns of information):

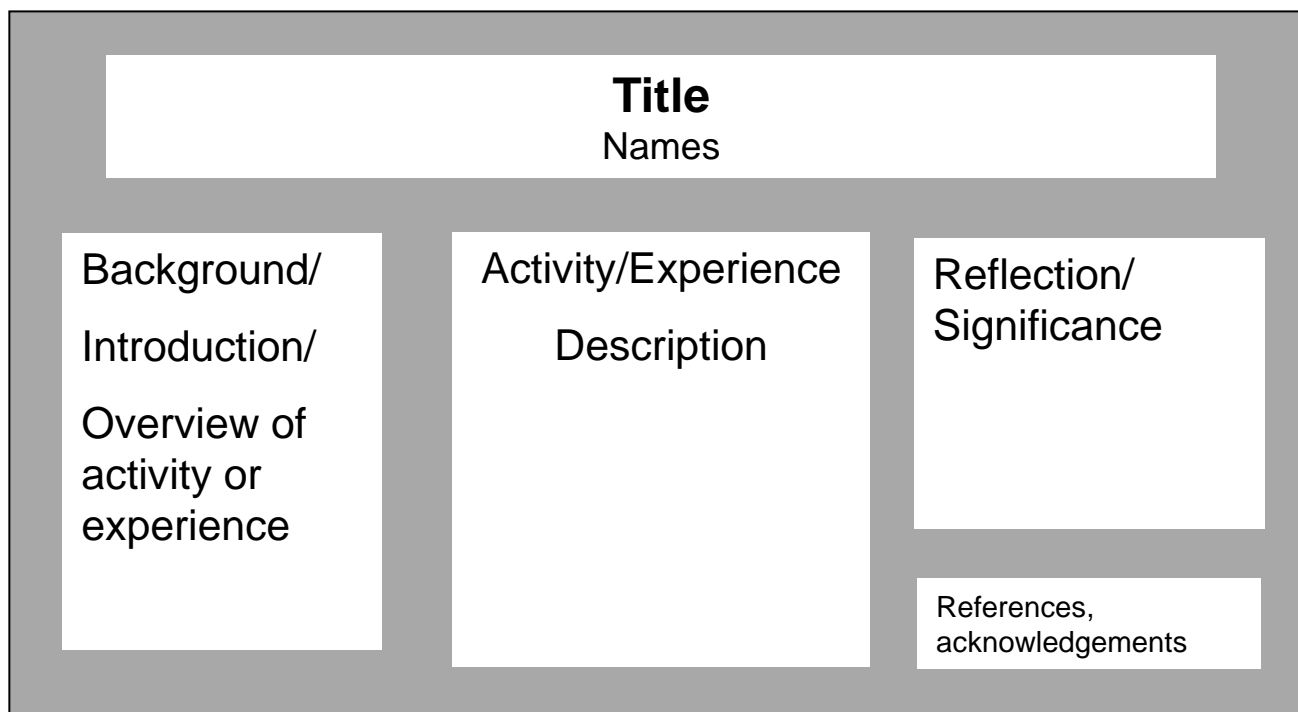




Overview: Layout

Activity or Experience

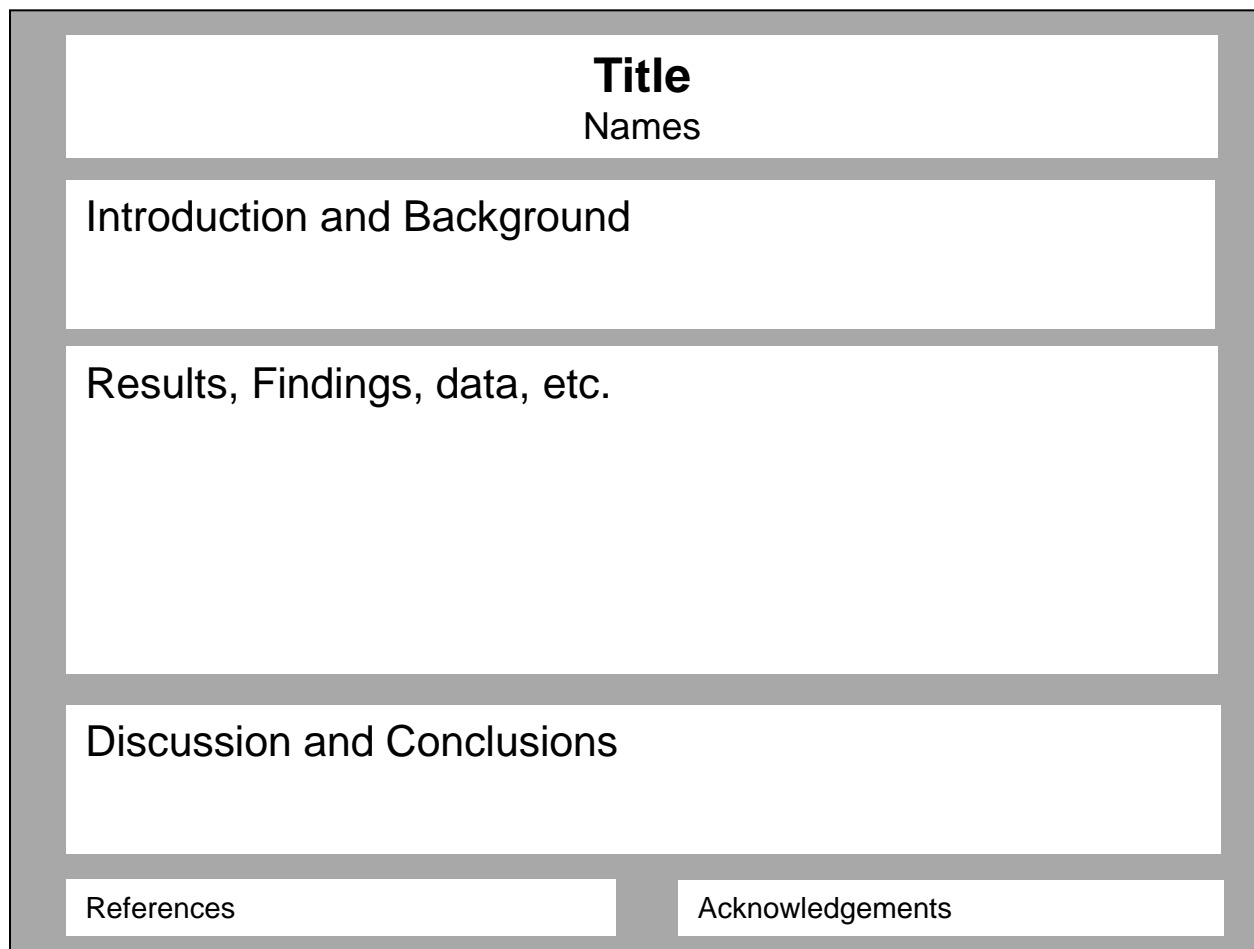
Expected layout (3-4 columns of information):





Overview: Layout

Alternative layout: Progression of information
(*much less common*)





Overview: Layout

Activity or Experience

Title Names	
Background/Introduction/Overview of activity or experience	
Activity/Event Description (what did you do)	
Reflection/Significance	
References	Acknowledgements



How To: Examples



Title

Names, departments

Introduction: Chemical Hydride Hydrolysis

- Chemical hydrides are a means of storing hydrogen.
- Sodium borohydride (NaBH_4) undergoes hydrolysis to produce hydrogen as follows:



- The coefficient x represents the hydration state of sodium metaborate (NaBO_2).
- Minimizing x minimizes the total weight in the hydrogen delivery system while maximizing the efficiency.
- Four stable hydration states exist and the formation of these states is temperature dependent and shown below:

Hydration State	Temperatures Where Stable
Tetrahydrate ($x=4$)	$<54^\circ\text{C}$
Dihydrate ($x=2$)	$54^\circ\text{C}-110^\circ\text{C}$
1/3-hydrate ($x=1/3$)	$110^\circ\text{C}-350^\circ\text{C}$
Anhydrous ($x=0$)	$>350^\circ\text{C}$

Water Usage and Reaction Pathway

- First attempted to hydrolyze sodium borohydride with liquid water.
- Required approximately 30 times more water than stoichiometric feed.
- Experimental conditions were limited to below 100°C , yielding low reaction rates.
- Experimental temperature range increased with steam hydrolysis reactor.
- Steam would adhere, or deliquesce, to the surface of sodium borohydride.
- Expanded temperatures to over 140°C .
- Low relative humidities prevent reaction at high temperature conditions.

Deliquescence

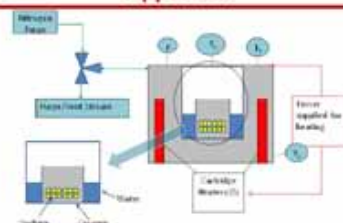
- Sodium Borohydride undergoes deliquescence in the presence of water vapor.
- Deliquescence is the process of water vapor in the air adhering to the surface of a solid.
- Water vapor goes to the liquid phase while in contact with the solid during deliquescence.
- Deliquescence usually ends with too much water surrounding the solid, in which case the water will dissolve the solid.
- Water vapor uses as little as 10% of the liquid water needed to pre-dissolve the NaBH_4 .
- As less water is needed to dissolve the NaBH_4 , the necessary weight of the reactor lessens which, in turn, increases the efficiency.



Hypothesis and Objectives

- Construct and utilize a high pressure batch reactor to hydrolyze solid sodium borohydride with water vapor.
- Predict the reaction progress as a function of time using the pressure profile
- Determine the amount of NaBH_4 conversion using Boron11-Nuclear Magnetic Resonance (^{11}B -NMR)
- Determine the water content of the final product using Thermogravimetric Analysis (TGA).

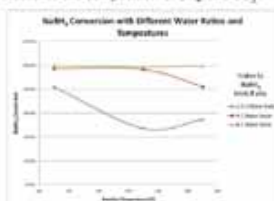
Apparatus



- Sodium borohydride and water are separated initially.
- Nitrogen originally pressurizes the bomb reactor.
- Heat is supplied to the reactor using six cartridge heaters.
- Thermocouples measure three temperatures at different points to ensure gradient.
- Pressure measurements were recorded by a pressure transducer.

NaBH_4 Conversion Measured with ^{11}B -NMR

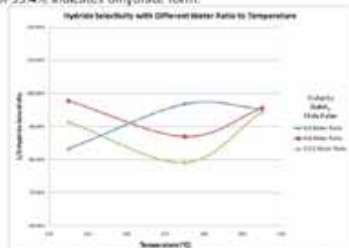
- ^{11}B -NMR analysis measures the composition of BH_4^- and BO_2^- .



- Hydrolysis goes to completion when a slight excess of water is introduced to the system.
- Reactions running only the stoichiometric water feed had approximately 50% conversion.
- Higher temperatures generate a faster reaction but at the cost of lower conversions.

Water Content of Product Measured by TGA

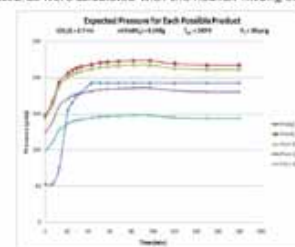
- The TGA quantifies the water of hydration in the NaBO_2 products.
- A mass loss of 8.4% indicates 1/3-hydrate form.
- A mass loss of 35.4% indicates dihydrate form.



- Higher selectivity of 1/3-hydrate is correlated to a lower water content in the final product
- TGA analysis suggests that the mass loss lies somewhere between 8.4% and 35.4%, consistent with the idea that a mixture of 1/3-hydrate and dihydrate would be formed.
- Runs with higher feeds of water favored the formation of the 1/3-hydrate form.
- At lower temperatures, 1/3-hydrate selectivity decreases with the water ratio.
- The effect of water to NaBH_4 feed ratio is minimal at higher pressures.

Pressure Profile

- Experimental pressures were recorded using a pressure transducer.
- One expected pressures can be calculated for each of the four possible hydration states of NaBO_2 .
- Expected pressures were calculated with the Redlich-Kwong equation of state.



Temperature (°C)	Molar Ratio of Water to NaBH_4	x^*	High- P Experimental Pressure (psia)	Theoretical Pressure (psia) $x=0$	Theoretical Pressure (psia) $x=1/3$	Theoretical Pressure (psia) $x=2$	Theoretical Pressure (psia) $x=4$
150	0.1	4	312.0	272.3	221.0	154.2	144.0
150	0.1	2	166.0	180.5	142.0	101.1	120.5
150	2.5/1	0.5	325.0	155.5	149.2	115.1	97.7
180	0.1	4	192.7	146.6	111.9	107.0	154.8
180	0.1	4	172.7	143.8	106.0	101.4	150.2
180	4/1	2	164.7	205.6	198.5	182.6	131.0
180	0.1	2	188.7	206.0	196.9	181.2	140.0
180	2.5/1	0.5	86.7	168.7	161.5	145.1	109.5
180	2.5/1	0.5	76.7	167.5	160.3	141.5	105.8
200	0.1	4	137.7	149.3	142.1	126.2	161.2
200	4/1	2	145.0	212.0	204.6	187.2	135.1
200	2.5/1	0.5	115.0	173.9	168.4	149.2	109.0

- From TGA, it is expected that the actual pressure will be between the 1/3-hydrate and dihydrate estimations
- Few experiments had a pressure profile precise enough to give expected pressures

Conclusions

- The batch reactor was successful in that the steam hydrolysis reaction went nearly to completion for runs with only a slight increase of water over the stoichiometric ratio.
- A stable 1/3 hydrate form of sodium metaborate was produced under the reaction conditions, significantly reducing the amount of water tied into the solid product.
- The decreased water in the solid product increases the efficiency of hydrogen delivery
- The stable hydration states did not appear to change with pressure.
- Although the pressure measurements were not as precise as desired, new reactor designs are being examined to address any potential problems.

Acknowledgements

- NSF Grant # CBET 0756089
- University of South Carolina Magellan Scholarship

References

- Siu, Hong; Boyd, Christopher M.; Bostel, Amy M.; and Marlowe, Michael A. "Upper phase batch hydrolysis of NaBH_4 at elevated temperatures and pressures." *International Journal of Hydrogen Energy* February 2011.
- Marrow Alfonso, B. Y.; Beaz, J. R.; Davis, T. A.; and Matthews, M. A. "Hydrolysis of sodium borohydride with steam hydrate." *International Journal of Hydrogen Energy* December 2007. 32 (18) 4717-4722
- Bostel, Amy M.; Davis, Thomas A.; and Matthews, Michael A. "An investigation in the hydrolysis of sodium borohydride by water vapor." *Industrial and Engineering Chemistry Research* 2010. 49 (10) 9566-9569



Title

Names, departments



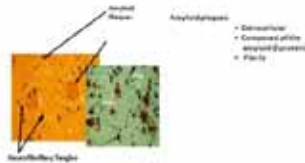
Abstract

Description of amyloid plaques within the cerebrovasculature consisting mostly of insoluble fibrillar amyloid protein (Aβ) aggregates, is a pathological feature in forms of Alzheimer's disease (AD) brain. Polyphenols such as resveratrol, quercetin and curcumin, have been considered promising in disease modifying therapy for AD as they are capable of inhibiting formation of Aβ or disaggregating preformed Aβ. In this study, we tested the effects of a new group of polyphenols - agones, isones, 3,3'-dihydroxyflavone and 3,3',3'',3'''-tetrahydroxyflavone - on Aβ aggregation.

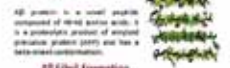
Thioflavin T (ThT) is a fluorescent Aβ that gives a characteristic fluorescence emission excitation when attached solely to the cross β-sheet conformation of Aβ, as required by Aβ monomers, dimers, or oligomers. Therefore, fluorescence changes are often used to detect changes in Aβ morphology upon the addition of polyphenols. A significant drop of ThT fluorescence, not consistent with the stable structure of Aβ, was observed in the presence of polyphenols. However, further testing by size exclusion chromatography (SEC) and transmission electron microscope (TEM) imaging showed that Aβ was actually not disaggregated by these polyphenols. These results suggest polyphenols do not actually disaggregate Aβ, but do limit their ThT binding action of polyphenols may have implications in slowing Aβ induced cellular damage in the AD brain.

Background and Significance

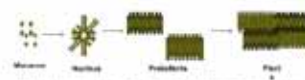
Neuropathological Properties



Aβ Protein

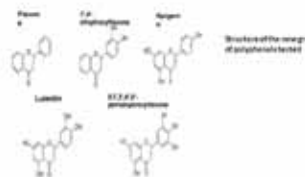


Aβ Fibril Formation

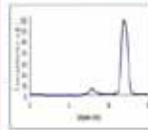


Amyloid fibrils are insoluble particles deposited in the brain and are formed by self-assembly of monomeric Aβ.

Methodology



Aβ Monomer Purification



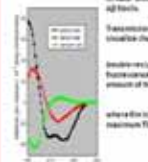
Size exclusion chromatography (SEC) is used to purify Aβ(1-42) peptide. Preexisting aggregates, which can serve as aggregation nuclei, are removed in this manner. The second peak represents the isolated monomeric species. Concentration of Aβ monomers is determined from UV absorbance at 280 nm corrected for light scattering.

Aβ Fibril Preparation

Isolated monomeric Aβ(1-42) was incubated with 100 nM ThT at 37°C and then agitated in a vortex at 500 rpm to promote assembly. ThT was removed by centrifugation.

Aβ Fibril Measurement

Thioflavin T (ThT) fluorescence was used to monitor the quantity of amyloid material. ThT binds the β-sheet structure of amyloid fibrils, giving a characteristic shifted fluorescence emission and excitation. Measurements were taken to correct fluorescence changes caused by the lower fibril effect.



Linear detection (LD) is used to measure β-sheet structure of Aβ fibrils.

Transmission electron microscope (TEM) imaging is used to visualize changes of Aβ.

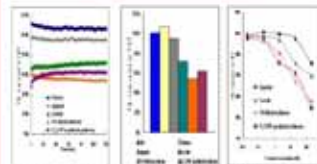
Double reciprocal plots of ThT concentration and corrected fluorescence for different polyphenol concentrations at fixed amounts of ThT were assessed to investigate binding competition. A Lineweaver-Burk plot (1/ThT vs 1/[Polyphenol]) shows the apparent binding constant. From this maximum ThT fluorescence.

Aβ Fibril Dissociation Assay

Aβ were diluted to 20 μM in which ThT with 100 nM ThT in presence of absence of 200 μM polyphenol. Reaction conditions were incubated without agitation at room temperature for at least 7 hours. Then samples were treated by ThT fluorescence (Th) and ThT.

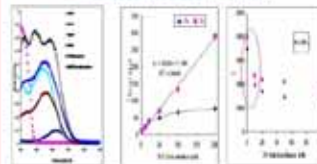
Results

ThT fluorescence change by adding polyphenols



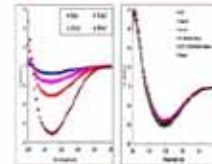
A. Line plot of ThT fluorescence was obtained after adding polyphenols into ThT solution in presence of ThT.

Fluorescence correction for lower fibril effect



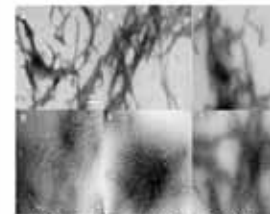
Strong optical absorption of polyphenol interferes ThT binding wavelength range. So the lower fibril effect only occurs for a small part of fluorescence wavelength range.

CD spectra of Aβ incubated with polyphenols



Highly positive difference mdeg at 208 nm indicates α-helical structure of Aβ. Compared to the control, there was no significant change of Aβ after incubation with polyphenols.

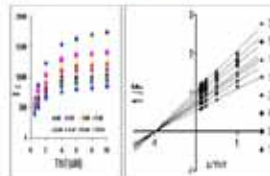
TEM imaging of Aβ incubated with polyphenols



As TEM by Atomic Force Microscope (AFM) and cryo-electron microscopy (cryo-EM) are performed.

Compared to the control morphology, there was no significant change of Aβ after incubation with polyphenols.

Double-reciprocal plots of ThT concentration and corrected fluorescence



Double-reciprocal plots of ThT concentration and corrected fluorescence indicate that polyphenols and ThT have noncompetitive binding to Aβ.

Conclusions

- Agones, isones, 3,3'-dihydroxyflavone, 3,3',3'',3'''-tetrahydroxyflavone, Resveratrol, Quercetin, and Curcumin inhibited Aβ aggregation.
- The lower fibril effect alone does not explain the large amount of fluorescent Aβ.
- Resveratrol and ThT imaging indicates polyphenols do not disaggregate Aβ.
- Double-reciprocal plots of ThT concentration and corrected fluorescence indicate that polyphenols and ThT have noncompetitive binding to Aβ.

Future Work

- Screen these polyphenols in different aggregation and dissociation mechanisms to determine if binding effect after aggregation is reversible.
- Determine whether polyphenols binding to Aβ can affect cell functions related to AD.

Acknowledgements

- Dr. Marc Resnick-Daniel
- NSF CAREER Award (BCI-0444262) to Dr. Resnick
- Stages for Cellular Undergraduate Research Award
- South Carolina Undergraduate Research Funding (SURF) through the South Carolina Research College
- Four Brady Awards: University of South Carolina's Undergraduate and Honorary Medicine Award



Title

Names, departments



Introduction

Wireless Networks

- Wireless networks are expected to be available and reliable at all times and all locations
- Environmental conditions like walls, weather, and large crowds cause problems

Smartphones

- Smartphones have a variety of sensors built into them that can gather information about the surrounding environment
- These sensors include accelerometers, compasses, light detectors, and proximity detectors
- They also have wifi radios and GPS

Goals

- This project aimed to use the readings from the sensors to detect situations that will cause reduced signal strength
- It may be possible to predict when the user is going to have poor reception so the phone can plan accordingly

Other Work

- A number of other projects are underway that also make use of the sensors available on smartphones
- Mobile Assistant for Inattentive Drivers (MAID)
- Increasing the reliability of natural interaction systems such as Microsoft's Kinect

Methods

Android App

- An app was developed for Android phones that would automatically collect data every 15 minutes
- This interval was chosen to balance frequency of collection with battery life
- The app was allowed to run constantly on the user's phone to collect data in real world situations
- The app uploaded data after each collection to a MySQL database

Data Collected

- Data collected included: time, proximity, battery level, location, cellular signal strength, and wifi signal strength
- The data were downloaded from the database into an Excel spreadsheet
- The correlation function in Excel was used to determine if acceleration, magnetic field, proximity, battery charge, or light appeared to have an influence on cellular and wifi signal strengths
- The data points corresponding to wifi signal strength were plotted on a map and color coded to indicate the signal strength of the University wireless network, "iscstudent" at that location.

Results and Discussion

Accelerometer

- Cellular Strength: 0.146
- Wifi Strength: 0.069
- These low correlation values indicate the absence of a relationship between acceleration and both cellular and wifi signal strengths

Magnetic Field

- Cellular Strength: -0.123
- Wifi Strength: -0.022
- These correlation values were even smaller than the ones for acceleration, so there is again little evidence to suggest a relationship between magnetic field and the signal strengths

Proximity

- Cellular Strength: -0.302
- Wifi Strength: -0.289
- These values are much stronger than the previous two and are the strongest observed.
- There is a possibility of a slight negative correlation
- The relatively strong correlation could also be explained by the phone being in a pocket versus in the open

Battery Charge

- Cellular Strength: -0.291
- Wifi Strength: -0.193
- These values are weaker than the proximity values and slightly negative
- There may be a negative correlation between battery charge and the signal strengths

Light

- Cellular Strength: 0.205
- Wifi Strength: 0.017
- These values were opposite the proximity values and much weaker
- This difference supports the possibility of being in the pocket reducing signal strength and being in the open increasing it

Figure 1: Wifi Map

- The map reveals the clustering of the data points
- As the project continues, a more even distribution of data points will be collected
- Wifi signal strength appears to be stronger inside than outside



Arena for Research on Emerging Networks and Applications

Wifi Map



Figure 1: Map of Wifi Signal Strength

Detail of Swearingen

Ongoing and Future Work

Signal Correlations with Other Sensors

- Use newer sensors such as gyroscopes, barometers, and thermometers
- Collect data in diverse scenarios using multiple phones

Mobile Assistant for Inattentive Drivers (MAID)

- Link the phone to the car's diagnostics port to get real-time data from the car's sensors
- Identify the fingerprint for each event and create the abstract sensor modules
 - Reckless: detect reckless driving
 - Speed: detect when the driver is going too fast
 - Turn signal: detect if the driver properly signaled before turning
 - Stop: detect if the driver obeyed a stop sign
 - Lost: detect when the driver appears to be lost
 - Yield: detect if the driver properly yielded at a yield sign
 - Clog: detect if the driver is causing traffic to back up behind him
 - Drunk: detect drunken driving
 - Lane change: detect lane changes
- Identify additional situations that might be detectable using the phone's sensors

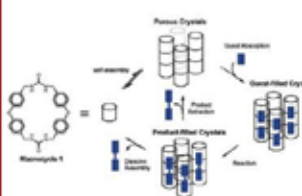
Enhancing Kinect with Smartphones

- Wifi uses accelerometer and gyroscope to detect motion
- Kinect uses video and depth cameras to detect motion
- Combine the two methods together to make a more robust system
 - Use the phone in the pocket in place of the Wifi remote
 - Use its accelerometer/gyroscope sensors to aid Kinect
- Allow players Kinect cannot see to interact with the system
- Help the system identify players from a crowd



Introduction

How are certain photochemical reactions influenced by being carried out in a confined environment?

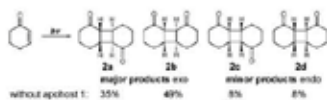


Macrocycles

- Porous self-assembling monomers
- Form tubular crystals
- Can increase selectivity of certain reactions
- Reusable

2-Cyclohexenone

- Phenylether macrocycle used as host
- Increased selectivity



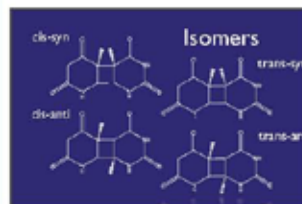
Background

Chemists are always looking for ways to make reactions more efficient. That is, they are always asking, "How can we attain a higher yield of our target product quicker, with less reagents, and with minimal environmental impact?" One possible solution can be found in running reactions in a confined environment. By restricting the reaction site, we not only can increase the selectivity of the products of the reaction, but also reduce the use of expensive, harsh chemical reagents. This concept is analogous to the use of enzymes in biological systems, where enzymes drive reactions by fitting substrates together and thereby reduce the activation energy for those reactions.



Benzophenone Macrocycle (BPMC)

One type of confined environment that is currently being studied employs the use of a porous crystalline tube-like structure known as a macrocycle that is composed of identical monomers. The size of these macrocyclic monomers that compose the macrocycle can be adjusted, allowing for control of the overall size of the macrocycle. This in turn provides for a wide range of molecules to react within the macrocycle.



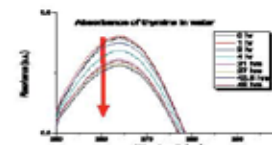
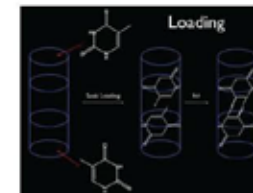
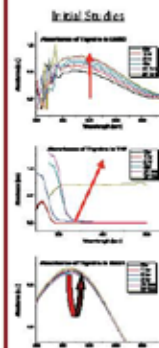
Thymine

- Structure is similar to 2-Cyclohexenone
- [2+2] photodimerization under UV irradiation
- Thymine photodimers cause links during DNA replication; can lead to melanoma

Methodology

Testing for the best solvent for soak loading

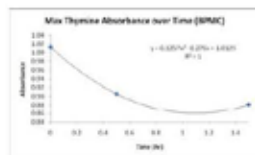
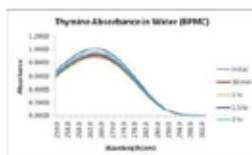
In which solvent does thymine absorbance decrease?



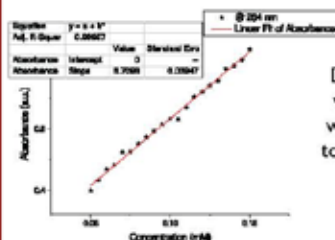
Water was found to be the best solvent candidate for soak loading.

Data & Discussion

Loading



Analytical absorbance study



Beer's Lambert Plot for Thymine in Water

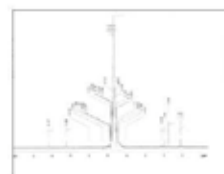
Decrease in absorbance was used in conjunction with Beer's-Lambert plot to determine a host : guest ratio of 2.38:1

Irradiation

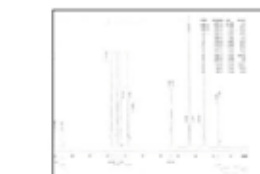


Thymine in D2O

1H-NMR Spectra



Extracted Thymine and Photoproducts after Irradiation



Thymine Loaded in BPMC

Preliminary results indicate two things. One, the guest molecule certainly loaded into the macrocycle. As is evident on the 1H-NMR spectrum, peaks for both thymine and the benzophenone macrocycle are present. The other finding is that irradiation of thymine in the host macrocycle produced peaks on the 1H-NMR spectrum different from that of just thymine. This indicates that irradiation inside of the macrocycle produced some unexpected products. Future work on this study must consist of producing a more specific identification of the irradiated products of thymine inside of the macrocycle.

References

1. Dewal, P. B.; Xu, Y.; Yang, J.; Mohammed, F.; Smith, M. D.; Shimizu, L. S. "Manipulating the cavity of a porous material changes the photoactivity of included guests." *Chem. Commun.* 2008, 3599-3611. Highlighted by Nature Chem. July 11, 2008. doi:10.1039/b801088a
2. Yang, J.; Dewal, P. B.; Shimizu, L. S. "Self-assembling beta-cyclodextrin macrocycles used as an organic zeolite for a highly stereoselective photodimerization of 2-cyclohexenone." *J. Am. Chem. Soc.* 2006, 128(25), 8122-8123.
3. Origins of Selectivity for the [2+2] Cycloaddition of α,β -unsaturated Ketones within a Porous Self-assembled Organic Framework: Jun Yang, Maher B. Dewal, Salvatore Profeta, Jr., Mark D. Smith, Youyong Li, and Linda S. Shimizu. *Journal of the American Chemical Society* 2008 130 (2), 612-621

Acknowledgements



I would like to thank Dr. Linda Shimizu for the wonderful opportunity to conduct undergraduate research during the Summer of 2010. I would also like to thank the entire Shimizu Group for their complete support and hospitality during my time as an undergraduate researcher. Finally, I would like to give very special regards to my Graduate Mentor, Michael Geer, who guided me through every step of this fantastic journey.



Rejuvenating Lime Production in Oman: Resolving Current Challenges

Resolving Current Challenges

R. Al-Yahya¹, F. Al-Hadi¹, A. Al-Sadi¹, H. Al-Wahabi¹, H. Dhadhah¹, H. Al-Wahidi¹, S. Al-Jumali¹, A. Al-Lawati¹, A. Al-Masroobi¹, A. Al-Masroobi¹

¹Department of the College of Horticulture and Plant Production, Sultan Qaboos University, College of Agriculture and Forest Sciences, Sultan Qaboos University, University of Muscat, Sultanate of Oman.



Abstract

Production of lime (*Citrus aurantiifolia*) and other related citrus species in Oman has been significantly reduced in recent years. The reduction in yield has been attributed to a combination of abiotic and biotic factors that adversely affected tree growth and productivity. Lime of area cultivated with lime trees was 97% of that in 1999 (Fig. 1), mostly due to Witches' Broom Disease of lime (WBDL). The disease that may have originated in the Bahamas has the potential to threaten lime production throughout the entire region of western Asia and North Africa allowing fast expansion to Oman as well. In Oman, these problems have been exacerbated by increasingly erratic climatic conditions caused by drought, salinity and soil acidity which ultimately led to the decline of lime production in the country (Fig. 2). The synergistic adverse effects of biotic and abiotic stresses on lime that yield have resulted loss of lime tree average yield productivity and reduced income from largely traditional farming systems. The economically low lime production has eventually led to abandonment of many farms, re-conversion of lime farms to mango farms, or to complete change of the land use into other commercial projects. While the causal agent of WBDL, i.e., *Aspidiotus perniciosus* has long been identified, practical solutions to the disease have not been tested and these challenges remain many years later. Through national and international collaborations, entomologists' experimentation in the laboratory and field testing of efficient management strategies, this research will tackle various causal agents of WBDL in Oman. The researchers aim to eventually provide practical solutions to lime lime growers, thus enabling them to restore production from abandoned lime orchards, long-term solutions through practical solutions on being perfectly evaluated and monitored. The proposed project will address the phylogenetic causal WBDL, through molecularly identifying native citrus species for resistance to aspidiotid, characterizing the interactions of WBDL with other citrus diseases, assessing breeding and hybridization of new Citrus rootstock sources, establishment of field trials for evaluating hybridized and exotic rootstocks of Citrus particularly lime, study the soil-borne diseases control and biotic and optimizing lime production through management of stressed trees.

Statement of the Problem



Fig. 1. Lime production (Yield in 1000) from 1999 to 2008. Source: Ministry of Agriculture, Sultanate of Oman.

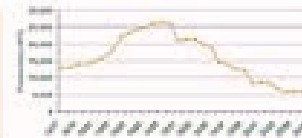


Fig. 2. Lime production (Yield in 1000) from 1999 to 2008. Source: Ministry of Agriculture, Sultanate of Oman.

Methodological Approach

Problem Identification: Identification of the problem (Lime production decline in Oman) and its causes (WBDL, climate change, soil acidity, salinity).

Conceptual Framework: Development of a conceptual framework for the study, including the identification of the causal agents of WBDL and the development of a management strategy.

Methodology: Identification of the methodology to be used, including field trials, laboratory experiments, and data analysis.

Field Trials: Establishment of field trials to evaluate the effectiveness of the proposed management strategy under real-world conditions.

Final Evaluation and Reporting: Evaluation of the results of the field trials and the development of a final report and management recommendations.



How To: Planning your poster



REMEMBER:

**You are not in this alone –
talk with your mentor!**

ASK for assistance!



What do you want the audience to know when finished?

Identify your message!



What information is
CRITICAL to understanding
this message?

**Include ONLY message
supporting information!**



Outline your message and supporting information

The abstract is a good starting point



Planning: Outline Information

#4
continued

Possible questions/issues to consider in your outline:

- 1) Clarify your message
- 2) What activities or results support message
- 3) What information is needed to understand the results/experience and how you got to those results
- 4) Are there images that can help explain or support the message
- 5) Introduce or explain the activity to put it in context
- 6) Are there any future plans or next steps
- 7) Review “typical” sections ([Slide #10](#))

Stay message focused!



Map your outline into
poster format on paper

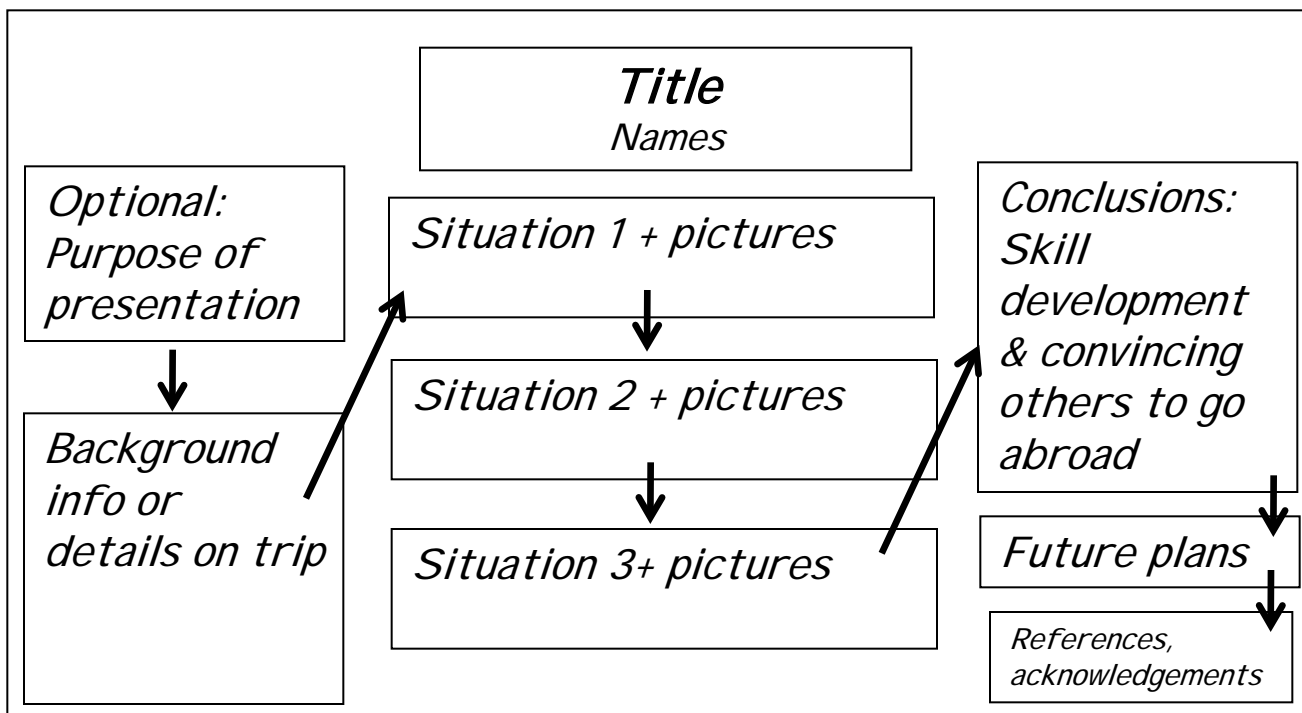
Review critically; focus on the message!



Planning: Mapping Poster

EXAMPLE

#5
continued



Review critically; focus on the message!



Planning: Resources

#6

- *Creating Effective Poster Presentations* by George Hess, Kathryn Tosney, Leon Liegel
<http://www.ncsu.edu/project/posters/NewSite/index.html>
- *How to Write a Research Poster* by Lorrie Faith Cranor
<http://xrds.acm.org/resources/how-to-write-research-poster.cfm>
- *Building Your Presentation Poster* by Dr. Linda Vick
http://www.npuphysics.org/resources/comp/building_your_poster.pdf
- *Poster Presentation of Research Work* from Dept. of Chemical and Process Engineering; University of Newcastle upon Tyne
<http://lorien.ncl.ac.uk/ming/Dept/Tips/present/posters.htm>



How To: Creating your poster



PowerPoint Resources: Web links

Poster-making 101 by Brian Pfohl and Greg Anderson

<http://abacus.bates.edu/~bpfohl/posters/>

Creating Posters with PowerPoint by the American Association of Cereal Chemists (AACC)

http://www.aaccnet.org/meetings/2003/powerpoint_posters.htm

Creating a PowerPoint Poster using Windows by Michael Dougherty

http://www.library.ucsf.edu/sites/all/files/ucsf_assets/ppt_poster_tutorial.pdf

**Discovery Day Poster Size (MAX):
48in (H) x 42in (W)**



PowerPoint Resources: Video links

YouTube videos: Creating posters in PowerPoint

Making an academic research poster using Power Point

by Jerry Overmyer (Mathematics and Science Teaching Institute (MAST), College of Natural and Health Sciences, University of Northern Colorado)

<http://www.youtube.com/watch?v=MqgjgwIXadA>

PowerPoint for Creating Posters (part 1 of 2)

by laddrob (University of North Carolina Chapel Hill Health Sciences Library tutorial)

http://www.youtube.com/user/laddrob#p/c/3545B3E6FF6FC203/0/P06os_Sep1A

PowerPoint for Creating Posters (part 2 of 2)

by laddrob (University of North Carolina Chapel Hill Health Sciences Library tutorial)

<http://www.youtube.com/user/laddrob#p/c/3545B3E6FF6FC203/1/cFzxXI7A1V0>

**Discovery Day Poster Size (MAX):
48in (H) x 42in (W)**



InDesign Resources: Video links

YouTube videos: Creating posters in InDesign

Create professional posters using Adobe InDesign

(9 part series) by laddrob (University of North Carolina Chapel Hill Health Sciences Library tutorial)

<http://www.youtube.com/user/laddrob#p/c/CD9BB6A8E39FC60F/7/fjCWYSGxeI>

**Discovery Day Poster Size (MAX):
48in (H) x 42in (W)**



How To:

Details: Making it GREAT



Guidelines: Color

Use color, photos, charts, and graphs to **support** your poster. and message.

Remember: A little color goes a long way. Stick to two, or **at most, three colors** for text.



Title

Names, departments



University of South Carolina, Columbia, SC

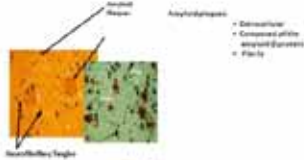
Abstract

Description of amyloid plaques within the neurofibrillations... consisting mostly of insoluble fibrillar amyloid protein (Aβ) aggregates... in a pathological feature in late stages of Alzheimer's disease (AD) brain tissue.

Thioflavin T (ThT) is a fluorescent Aβ that gives a characteristic fluorescence emission and excitation spectra... ThT binds the β-sheet structure of Aβ...

Background and Significance

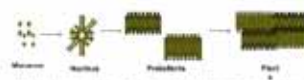
Neuropathological Properties



Aβ Protein

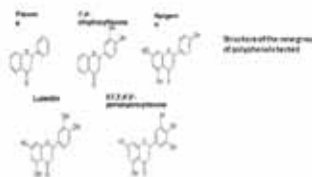
Aβ protein is a small peptide composed of 42 amino acids... It is a proteolytic product of amyloid precursor protein (APP)...

Aβ Fibril Formation

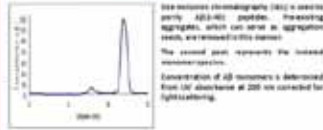


Amyloid fibrils are insoluble peptide fibrils in the brain and are formed by self-association of monomeric Aβ.

Methodology



Aβ Monomer Purification



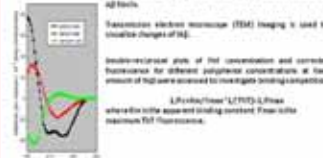
Aβ Fibril Preparation

Increased monomers (Aβ) were incubated with 100 μM ThT at 37°C and then agitated on a vortex at 500 rpm to provide synthetic Aβ seed formed by denaturation.

Aβ Fibril Measurement

Thioflavin T (ThT) fluorescence was used to monitor the quantity of amyloid material. ThT binds the β-sheet structure of amyloid fibrils, giving a characteristic shifted fluorescence emission and excitation.

Linear dichroism (LD) is used to measure β-sheet structure of Aβ fibrils.

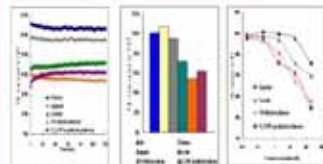


Aβ Fibril Dissociation Assay

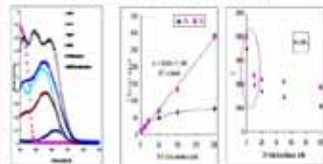
Aβ were diluted to 10 μM in 20 mM Tris with 150 mM NaCl in presence or absence of 100 μM polyphenols. Reaction conditions were incubated without agitation at room temperature for at least 3 hours.

Results

ThT fluorescence change by adding polyphenols

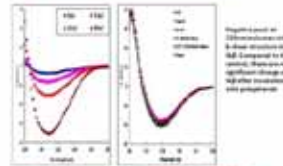


Fluorescence correction for inner filter effect



Being spectrophotometer of polyphenol surface ThT binding wavelength range. But the inner filter effect only accounts for a small portion of fluorescence quenching.

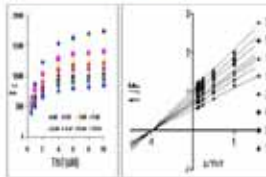
CD spectra of Aβ incubated with polyphenols



ThT imaging of Aβ incubated with polyphenols



Double-exposure plots of ThT concentration and corrected fluorescence



Conclusions

- Polyphenols, resveratrol, EGCG, and quercetin, decrease ThT fluorescence associated with Aβ.
- The inner filter effect alone does not explain the improvement of fluorescent ThT.
- Based on CD and ThT imaging evidence, polyphenols do not disassemble Aβ.
- Double-exposure plots of ThT concentration and corrected fluorescence indicate that polyphenols and ThT may noncompetitively bind to Aβ.

Future Work

- Assess direct polyphenol to amyloid aggregation and dissociation mechanisms, to determine if binding effect alters aggregation mechanism.
- Assess how other polyphenols binding to ThT can affect such processes linked to AD.

Acknowledgements

- Dr. Mike Research Director
- NSF CAREER Award (DRL-0944262) to Dr. Li
- Magellan Institute Undergraduate Research Award
- South Carolina Integratable Research Funding (SIRF) through the South Carolina Research College
- Play Books Grant (University of South Carolina) Complementary and Alternative Medicine Center

Good use of color to highlight and separate sections; uses color and pictures effectively in results



Guidelines: Color

When choosing colors for your poster, err on the side of conservatism.

Chartreuse and pink? **Not so much!**

Certain colors when side-by-side “vibrate” making text difficult to read:

Headache

Yikes



Impacts of sea-level rise on Seattle, WA

DANIEL MAHR • BROWN UNIVERSITY • GEO132 • DECEMBER 12, 2009

Introduction

During the early months of global warming, cities are being inundated by rising sea levels and their destruction. Understanding the effects of rising sea levels is essential to protect cities in the future. Rising sea levels are causing cities to be built higher, but cities are still being inundated by rising sea levels. This is because the cities are built on low-lying land.

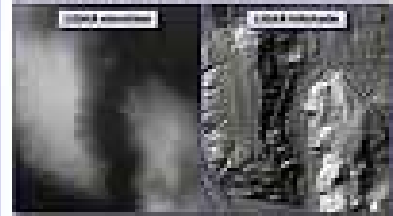
Research questions:

- How much land will be affected by rising sea levels in an urban area?
- How will the average urban population affect different cities?

Data

Researchers collect high-resolution satellite data and use this data to create maps of urban areas. They use this data to create maps of urban areas and use this data to create maps of urban areas.

2004 satellite **2004 satellite**



Due to the quality of 2004 data, I chose the King County study area as a result of the accuracy and high resolution. 2004 data sets from the West Coast (and elsewhere) are available. The data is available in a format that is easy to use and is a good source of data.

Research: For the purposes of this study, I used the King County study area as a result of the accuracy and high resolution. 2004 data sets from the West Coast (and elsewhere) are available. The data is available in a format that is easy to use and is a good source of data.

Methods

Sea level rise impact:

- Using a sea level rise impact model, I calculated the amount of land that would be affected by rising sea levels. I used a sea level rise impact model to calculate the amount of land that would be affected by rising sea levels.

Population impact:

- Using a population impact model, I calculated the amount of population that would be affected by rising sea levels. I used a population impact model to calculate the amount of population that would be affected by rising sea levels.

Other questions:

- How much land will be affected by rising sea levels in an urban area?
- How will the average urban population affect different cities?

Results

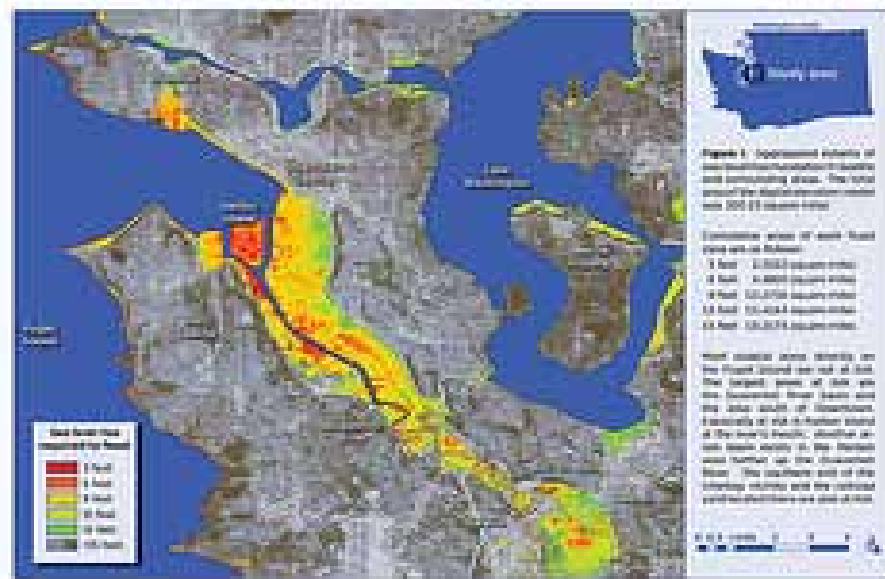
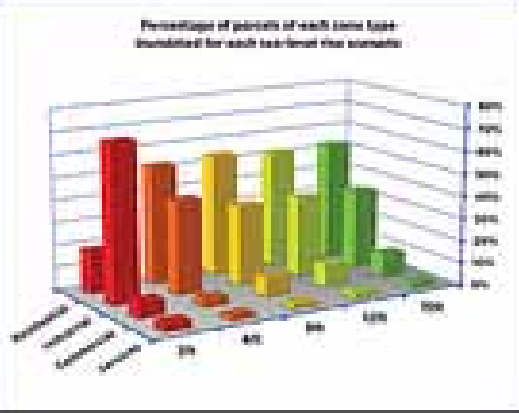


Figure 2. Sea level rise inundation impact the urban area. Land that represents the percentage of parcels of that size that are at the total number of parcels transferred for the depth. The amount, 1% of parcels transferred for 1 foot of inundation and 10% of parcels transferred for 10 feet of inundation are shown in the map. The color scale represents the depth of inundation in feet.

The color scale for the percentage of parcels of that size that are at the total number of parcels transferred for the depth. The amount, 1% of parcels transferred for 1 foot of inundation and 10% of parcels transferred for 10 feet of inundation are shown in the map. The color scale represents the depth of inundation in feet.

Parcel categories in "landfill" include government buildings, the stadium, police station, hospital, theater of science, athletic center, parking lot, museum, and theater.

Depth	Area	Percentage	Number of parcels	Percentage of parcels	Total
1 foot	1,000 sq mi	1%	100,000	1%	100,000
2 feet	2,000 sq mi	2%	200,000	2%	200,000
3 feet	3,000 sq mi	3%	300,000	3%	300,000
4 feet	4,000 sq mi	4%	400,000	4%	400,000
5 feet	5,000 sq mi	5%	500,000	5%	500,000
6 feet	6,000 sq mi	6%	600,000	6%	600,000
7 feet	7,000 sq mi	7%	700,000	7%	700,000
8 feet	8,000 sq mi	8%	800,000	8%	800,000
9 feet	9,000 sq mi	9%	900,000	9%	900,000
10 feet	10,000 sq mi	10%	1,000,000	10%	1,000,000



Discussion

Sea level rise impact:

During the early months of global warming, cities are being inundated by rising sea levels and their destruction. Understanding the effects of rising sea levels is essential to protect cities in the future. Rising sea levels are causing cities to be built higher, but cities are still being inundated by rising sea levels. This is because the cities are built on low-lying land.

Population impact:

Using a population impact model, I calculated the amount of population that would be affected by rising sea levels. I used a population impact model to calculate the amount of population that would be affected by rising sea levels.

Conclusions

During the early months of global warming, cities are being inundated by rising sea levels and their destruction. Understanding the effects of rising sea levels is essential to protect cities in the future. Rising sea levels are causing cities to be built higher, but cities are still being inundated by rising sea levels. This is because the cities are built on low-lying land.

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Sea level rise impact:

During the early months of global warming, cities are being inundated by rising sea levels and their destruction. Understanding the effects of rising sea levels is essential to protect cities in the future. Rising sea levels are causing cities to be built higher, but cities are still being inundated by rising sea levels. This is because the cities are built on low-lying land.

Good use of color and contrast; sections highlighted and separated for emphasis; good focus on data/results; bit wordy in areas



Title
Names, departments

Introduction

Recent studies have demonstrated the potential use of carbon nanotubes as a novel and programmable platform for organic chemical reactions effectively providing a basic framework to control reaction selectivity.

Efficient access to large functionalized carbon nanotubes (CNTs) is essential for their use in a wide range of applications. The specific sites resulting from functionalization of CNTs are highly dependent on the reaction conditions.

CPMO

CPMO (Cyanophenyl-modified carbon nanotube) is a novel functionalized carbon nanotube derivative. It is characterized by the presence of cyanophenyl groups on the surface of the carbon nanotube. The synthesis of CPMO involves the reaction of carbon nanotubes with cyanophenyl groups under specific conditions.

Figure 1. CPMO structure. (A) Schematic representation of the CPMO structure. (B) SEM image of CPMO. (C) TEM image of CPMO. (D) HRTEM image of CPMO. (E) XRD pattern of CPMO. (F) Raman spectrum of CPMO. (G) FTIR spectrum of CPMO. (H) UV-Vis absorption spectrum of CPMO. (I) TGA curve of CPMO. (J) DSC curve of CPMO. (K) TGA curve of CPMO in air. (L) DSC curve of CPMO in air. (M) TGA curve of CPMO in N₂. (N) DSC curve of CPMO in N₂. (O) TGA curve of CPMO in O₂. (P) DSC curve of CPMO in O₂. (Q) TGA curve of CPMO in CO₂. (R) DSC curve of CPMO in CO₂. (S) TGA curve of CPMO in H₂O. (T) DSC curve of CPMO in H₂O. (U) TGA curve of CPMO in H₂O. (V) DSC curve of CPMO in H₂O. (W) TGA curve of CPMO in H₂O. (X) DSC curve of CPMO in H₂O. (Y) TGA curve of CPMO in H₂O. (Z) DSC curve of CPMO in H₂O.

Figure 2. Synthesis of CPMO. (A) Schematic representation of the synthesis of CPMO. (B) SEM image of CPMO. (C) TEM image of CPMO. (D) HRTEM image of CPMO. (E) XRD pattern of CPMO. (F) Raman spectrum of CPMO. (G) FTIR spectrum of CPMO. (H) UV-Vis absorption spectrum of CPMO. (I) TGA curve of CPMO. (J) DSC curve of CPMO. (K) TGA curve of CPMO in air. (L) DSC curve of CPMO in air. (M) TGA curve of CPMO in N₂. (N) DSC curve of CPMO in N₂. (O) TGA curve of CPMO in O₂. (P) DSC curve of CPMO in O₂. (Q) TGA curve of CPMO in CO₂. (R) DSC curve of CPMO in CO₂. (S) TGA curve of CPMO in H₂O. (T) DSC curve of CPMO in H₂O. (U) TGA curve of CPMO in H₂O. (V) DSC curve of CPMO in H₂O. (W) TGA curve of CPMO in H₂O. (X) DSC curve of CPMO in H₂O. (Y) TGA curve of CPMO in H₂O. (Z) DSC curve of CPMO in H₂O.

Research Project

The goal of this research project was to synthesize CPMO and study its properties. The synthesis of CPMO was carried out using a modified method. The properties of CPMO were studied using various techniques. The results of the study are presented in this paper.

Figure 3. Synthesis of CPMO. (A) Schematic representation of the synthesis of CPMO. (B) SEM image of CPMO. (C) TEM image of CPMO. (D) HRTEM image of CPMO. (E) XRD pattern of CPMO. (F) Raman spectrum of CPMO. (G) FTIR spectrum of CPMO. (H) UV-Vis absorption spectrum of CPMO. (I) TGA curve of CPMO. (J) DSC curve of CPMO. (K) TGA curve of CPMO in air. (L) DSC curve of CPMO in air. (M) TGA curve of CPMO in N₂. (N) DSC curve of CPMO in N₂. (O) TGA curve of CPMO in O₂. (P) DSC curve of CPMO in O₂. (Q) TGA curve of CPMO in CO₂. (R) DSC curve of CPMO in CO₂. (S) TGA curve of CPMO in H₂O. (T) DSC curve of CPMO in H₂O. (U) TGA curve of CPMO in H₂O. (V) DSC curve of CPMO in H₂O. (W) TGA curve of CPMO in H₂O. (X) DSC curve of CPMO in H₂O. (Y) TGA curve of CPMO in H₂O. (Z) DSC curve of CPMO in H₂O.

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Background overwhelming text; text too small



Guidelines: Text

Break text into easy-to-read chunks:

- Use paragraphs sparingly
- Use lists/bullets
- Use audience appropriate language
- Use distinctive section headers
 - Emphasize with text size, color, or font



Introduction

Wireless Networks

- Wireless networks are expected to be available and reliable at all times and all locations.
- Environmental conditions like walls, weather, and large crowds cause problems.

Smartphones

- Smartphones have a variety of sensors built into them that can gather information about the surrounding environment.
- These sensors include accelerometers, compasses, light detectors, and proximity detectors.
- They also have wifi radios and GPS.

Goals

- This project aimed to use the readings from the sensors to detect situations that will cause reduced signal strength.
- It may be possible to predict when the user is going to have poor reception so the phone can plan accordingly.

Other Work

- A number of other projects are underway that also make use of the sensors available on smartphones.
- Mobile Assistant for Inattentive Drivers (MAID)
- Increasing the reliability of natural interaction systems such as Microsoft's Kinect.

Methods

Android App

- An app was developed for Android phones that would automatically collect data every 15 minutes.
- This interval was chosen to balance frequency of collection with battery life.
- The app was allowed to run constantly on the user's phone to collect data in real world situations.
- The app uploaded data after each collection to a MySQL database.

Data Collected

- Data collected included: time, proximity, battery level, location, cellular signal strength, and wifi signal strength.
- The data were downloaded from the database into an Excel spreadsheet.
- The correlation function in Excel was used to determine if acceleration, magnetic field, proximity, battery charge, or light appeared to have an influence on cellular and wifi signal strengths.
- The data points corresponding to wifi signal strength were plotted on a map and color coded to indicate the signal strength of the University wireless network, "uscadnet" at that location.

Results and Discussion

Accelerometer

- Cellular Strength: 0.146
- Wifi Strength: 0.069
- These low correlation values indicate the absence of a relationship between acceleration and both cellular and wifi signal strengths.

Magnetic Field

- Cellular Strength: -0.123
- Wifi Strength: -0.022
- These correlation values were even smaller than the ones for acceleration, so there is again little evidence to suggest a relationship between magnetic field and the signal strengths.

Proximity

- Cellular Strength: -0.302
- Wifi Strength: -0.289
- These values are much stronger than the previous two and are the strongest observed.
- There is a possibility of a slight negative correlation.
- The relatively strong correlation could also be explained by the phone being in a pocket versus in the open.

Battery Charge

- Cellular Strength: -0.291
- Wifi Strength: -0.193
- These values are weaker than the proximity values and slightly negative.
- There may be a negative correlation between battery charge and the signal strengths.

Light

- Cellular Strength: 0.205
- Wifi Strength: 0.017
- These values were opposite the proximity values and much weaker.
- This difference supports the possibility of being in the pocket reducing signal strength and being in the open increasing it.

Figure 1: Wifi Map

- The map reveals the clustering of the data points.
- As the project continues, a more even distribution of data points will be collected.
- Wifi signal strength appears to be stronger inside than outside.



Arena for Research on Emerging Networks and Applications

Wifi Map



Figure 1: Map of Wifi Signal Strength

Ongoing and Future Work

Signal Correlations with Other Sensors

- Use newer sensors such as gyroscopes, barometers, and thermometers.
- Collect data in diverse scenarios using multiple phones.

Mobile Assistant for Inattentive Drivers (MAID)

- Link the phone to the car's diagnostics port to get real-time data from the car's sensors.
- Identify the fingerprint for each event and create the abstract sensor modules.
 - Reckless: detect reckless driving
 - Speed: detect when the driver is going too fast
 - Turn signal: detect if the driver properly signaled before turning
 - Stop: detect if the driver obeyed a stop sign
 - Lost: detect when the driver appears to be lost
 - Yield: detect if the driver properly yielded at a yield sign
 - Clog: detect if the driver is causing traffic to back up behind him
 - Drunk: detect drunken driving
 - Lane change: detect lane changes
- Identify additional situations that might be detectable using the phone's sensors.

Enhancing Kinect with Smartphones

- Wii uses accelerometer and gyroscope to detect motion
- Kinect uses video and depth cameras to detect motion
- Combine the two methods together to make a more robust system.
 - Use the phone in the pocket in place of the Wii remote.
 - Use its accelerometer/gyroscope sensors to aid Kinect.
 - Allow players Kinect cannot see to interact with the system.
 - Help the system identify players from a crowd.

Good use of color and contrast; sections highlighted and separated for emphasis; bulleted lists easier to read



Guidelines: Text

Use an easy-to-read font for all text at a minimum size of 24pt.

Avoid ALL-CAPS for extended blocks of text, as they are **HARD TO READ**.



Guidelines: Text

Studies show that serifed fonts are easiest to read for long blocks of text.

Limit yourself to two fonts – generally one serifed and one non-serifed.



Guidelines: Text

Use “standard” fonts, such as:

Serif:

- Times New Roman
- Garamond
- Georgia

Sans Serif:

- Arial
- Verdana

Symbols, math:

Use only the most basic symbols needed



Guidelines: Text

Using “standard” fonts limits printing concerns

Unknown fonts might be changed during the printing process, resulting in changes to your design and layout

To avoid font substitution, see “how to” docs for embedding fonts prior to printing



Guidelines: Text

Suggested font sizes:

- **Title** - sans serif, Title Case, 90-120pts
- **Sub Titles** (names, etc) - sans serif, 72 pts
- **Section Titles** - sans serif, 45 pts
- **Main Text** - serif font, minimum 24pts
(bigger is better!)



Guidelines: Images

Pictures, graphs, etc = **GOOD!**

Clip art = **BAD!!!!**

If your work depends on illustrations but you can't draw to save your life, make friends with someone who can or do without.



Guidelines: Images

- Check the quality of your image, picture, graph, etc. **BEFORE** printing (check it at 100% size – find this under “View” in PowerPoint)
- Avoid pixilated pictures and graphs!



Guidelines: Images

Don't use images you find on the internet for your poster unless you know:

1. The images are not copyrighted
2. The images are large enough to print well on your poster



Simplify!



Question everything!

- Does it support the message
- Is the language understandable
- Is it too wordy
- Is it too busy



How To: Viewing and Editing



Viewing and Editing

Throughout the process, view layout and contents at **full size** and **overall**!

In PowerPoint:

- To view full size: View-Zoom-100%
- To view overall: View – “fit-to-window”



Viewing and Editing

Share drafts with mentor and peers:

- HONEST opinions
- Editing assistance (grammar, spelling, language usage, layout, aesthetics, etc)

In PowerPoint:

- Email PowerPoint file
- Convert to PDF (Office button-Save As-PDF)
- Print on 8.5x11 paper (Office button-Print-check box: Scale to fit paper-preview to confirm-Print)



Viewing and Editing

Full size editing:

If possible, it's a great idea to print out a full size draft for editing

HOW: (tips here: <http://www.sc.edu/our/links.shtml#creating>)

- Printers
- Adobe Acrobat
- Publisher
- Excel
- Other?



Formatting and Printing

Poster size (MAX)

- 48in (H) x 42in (W) (not a typo!)

Contact the printer BEFORE to confirm printing requirements, issues, etc

Where to print:

- USC printing (COUPON!) <http://printing.sc.edu/>
- CAS – Gambrell Hall <http://www.cas.sc.edu/citc/>
- School of Medicine <http://dba.med.sc.edu/price/irf/PosterP.htm>
- Kinkos



Remember:

A successful poster...

- conveys a **clear message**,
- by **high-impact** visual information,
- with **minimum** text

...grabs attention!



How To: Presenting



The TALK

- Prepare a 30sec, 2min, and 5min overview of your project/activity
- Possible topics (think message and outline):
 - the context of your problem/experience and why it is important (Introduction/Background),
 - your objective and what you did
 - what you discovered or results, and
 - what the answer means in terms of the context or the impact

Spread the message!



Consider Audience

- Be prepared to talk with experts and non-experts
- Know definitions
- Critically review your poster and talk for potential questions
- Don't be scared of "I don't know," "I hadn't thought of that," and "Great idea!"

Don't assume knowledge!



Engage the viewer

- Invite the viewer to ask questions or offer to “walk them through it”
- Use the poster as a visual aid to emphasize points and share information (point to things)
- Don’t stand in front of your poster (can move in while pointing to things)

Be welcoming!



Attitude

- If you are bored – your audience will be bored!
- Show your enthusiasm for your topic

Share your passion!



Appearance

- Don't distract the audience with your own appearance
- Be neatly neutral OR complement colors
- Business casual (suits not required)
- Sensible shoes (remember standing!)

Don't clash!



UNIVERSITY OF SOUTH CAROLINA

DISCOVERY DAY

Logistics



Review

Discovery Day guidebook

on OUR website



Logistics

Discovery Date: last Friday of classes
(see website for specifics)

Location: Russell House Ballroom

Tentative Schedule:

8:30am-1:00pm	Registration: Russell House Lobby
9:00am-11:00am	Morning poster session: RH Ballroom
9:00am-11:30am	Morning oral & creative presentations: RH varies
12:30pm-3:00pm	Afternoon oral & creative sessions: RH varies
1:00pm-3:00pm	Afternoon poster session: RH Ballroom
3:00pm-3:30pm	Reception: RH 3rd Floor Lobby
3:30pm-4:30pm	Awards Ceremony: RH Theatre



Logistics

- 2 poster sessions (morning and afternoon)
- Assignments random unless abstract submitted by **PRIORITY** deadline (last Friday before Spring Break)
- Notification on timing: week before (on website and by email)
- At Ballroom door, give your last name and you will be shown to poster location



Logistics

- 2 posters per side of display board
- Poster dimensions: 3-4 ft high x 3.5 ft wide
- 4 t-pins provided to hang
- Angle pins down NOT straight through
- PRIOR to April 10 may request table, electricity, etc
- Nametags and abstract books at registration table



Logistics

- Posters sub-divided into categories
- Categories based on topic/mentor department
- Judged within categories (IF selected yes on abstract submission; can only change to NO)



Logistics

- Judging guidelines in guidebook
- Judges: faculty, staff, and grad students
- Judges: 2-3 per section
- Judges are NOT experts in field
- No judging if NOT present at poster



Logistics

- Award Ceremony: *attendance expected*
- Awards:
 - receive envelope with instructions for receiving prize
 - Provided as scholarship (some restrictions)



DISCOVERY DAY

...a forum for
student ingenuity!