

Name: Nicola Anthony

**Educational Background:**

B. Sc. at the University of Birmingham (UK) in Zoology & Comp. Physiology

Ph.D at the University of Cambridge (UK) in Zoology

M.Sc. at the University of Wisconsin (USA) in Conservation Biology and Sustainable Development

Current Appointment: Associate professor at the University of New Orleans



**Research Interests & Accomplishments:** Research in the Anthony laboratory is primarily focused on understanding the role that history, landscape and ecology have played in shaping the diversification of forest vertebrates (gorillas, antelope) in the central African tropics. More recently we have begun a major international collaborative project to prioritize areas for conservation based on genome-wide patterns of adaptive evolutionary potential in a wide range of central African forest taxa. This project also seeks to develop a prioritization scheme for protected areas that is both evolutionary-informed and grounded in the socio-economic constraints of the region. We are also interested in understanding fitness consequences of fragmentation in island reptiles and have projects in development in the Greek and Caribbean islands.

**Educational Interests:** I teach a variety of courses in evolutionary biology and conservation sciences. I have a strong commitment to capacity building in central Africa and recently co-organized a workshop in Gabon aimed at building partnerships between US, African and European scientists.



# On The Challenges and Applications of Wireless Sensor Networks

## Linnyer Beatrys Ruiz Aylon

Linnyer @gmail.com

Innovation advisor, and Computer Science Professor at State University of Maringá (UEM), Brazil.

Counselor of the of the Brazilian Society of Microelectronics (SBMICRO)

Head of Manna Team - Invisible Computing Engineering Research Group

National Institute for Science and Technology of Micro and Nanoelectronics Systems (INCT NAMITEC)

WSN is an emerging technology that promises unprecedented ability to monitor, instrument, and eventually control the physical world. In general, it consists of a large number of inexpensive wireless devices (sensor nodes) densely distributed over a region of interest. Wireless sensor networks will also play a key role in pervasive computing where computational devices and people are connected to the Internet. Many researchers who work in the area predict that within this decade, distributed sensing and computing will be present into every home, building, office, factory, car, human body, street, environment, farm, and so on

### Sensor Nodes

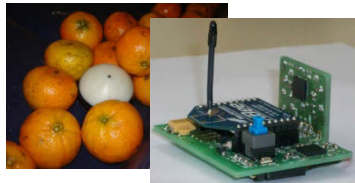
Sensor nodes are designed with small dimensions ( $\text{cm}^3$  or  $\text{nm}^3$ ), which ends up restraining their resources, like energy source, processor and communication capacities.

### Challenges

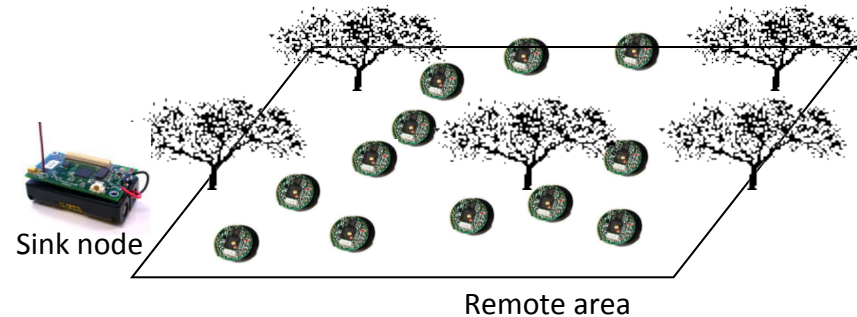
The task of building and deploying solutions in environments where there will be tens of thousands of network elements with particular features and organization is not trivial. This task becomes worse due to physical restrictions of the sensor nodes, in particular in the energy and bandwidth fields.



JPL: Sensor Webs



INCT NAMITEC Brazil



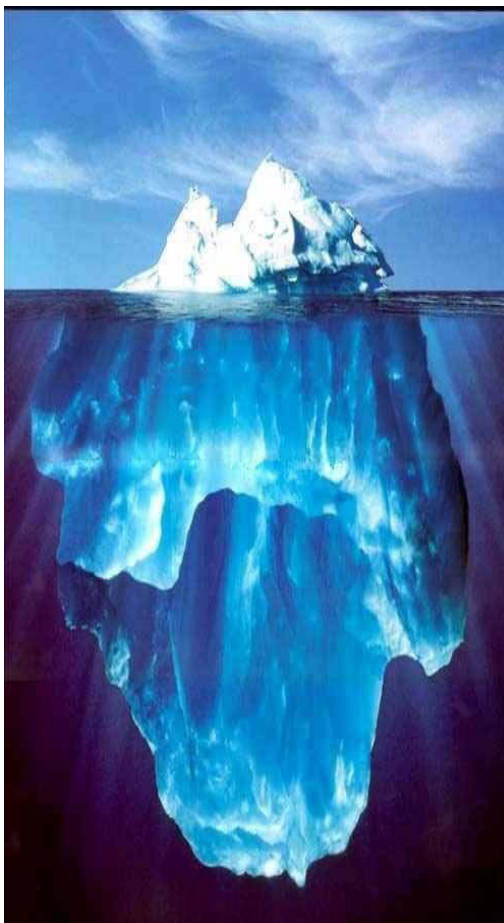
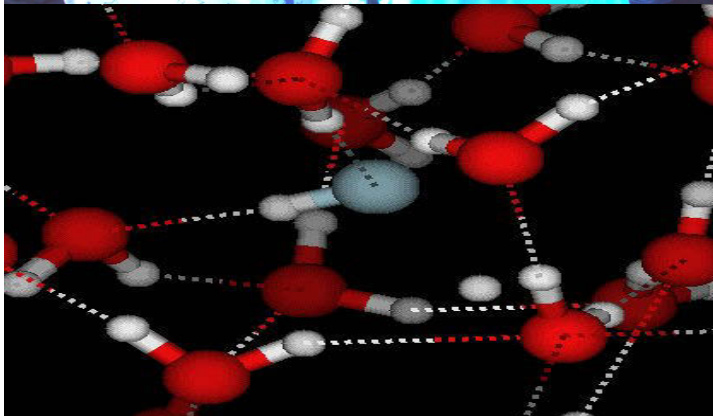
### Applications

- ☐ Monitoring of forests to avoid fire outbreaks, or rivers to detect pollution, or air quality in the cities
- ☐ Disaster Recovery to collect various parameters that help in establishing rescue strategies
- ☐ Diverse monitoring applications where equipment installation and maintenance costs are critical issues
- ☐ Habitat monitoring to collect data about species
- ☐ Healthcare
- ☐ Experiments in fruit packinghouses during the post harvest process to check for mechanical damages

The success of that vision relies fundamentally on good solutions for hardware, software and communication



## Marcia Barbosa: Water and Women in Physics



# Vanderlan da Silva Bolzani - Full Professor of Organic Chemistry in the Institute of Chemistry, Sao Paulo State University-UNESP, Araraquara – SP, Brazil

## Research Interests & Accomplishments:

Natural Products Chemistry focused on:

- Searching for potential antimalarial, antichagasic, anticancer, and acetylcholinesterase inhibitors compounds from plants of the Brazilian biodiversity;
- Biosynthetic studies of the promising bioactive compounds;
- Medicinal Chemistry of promising bioactive compounds;

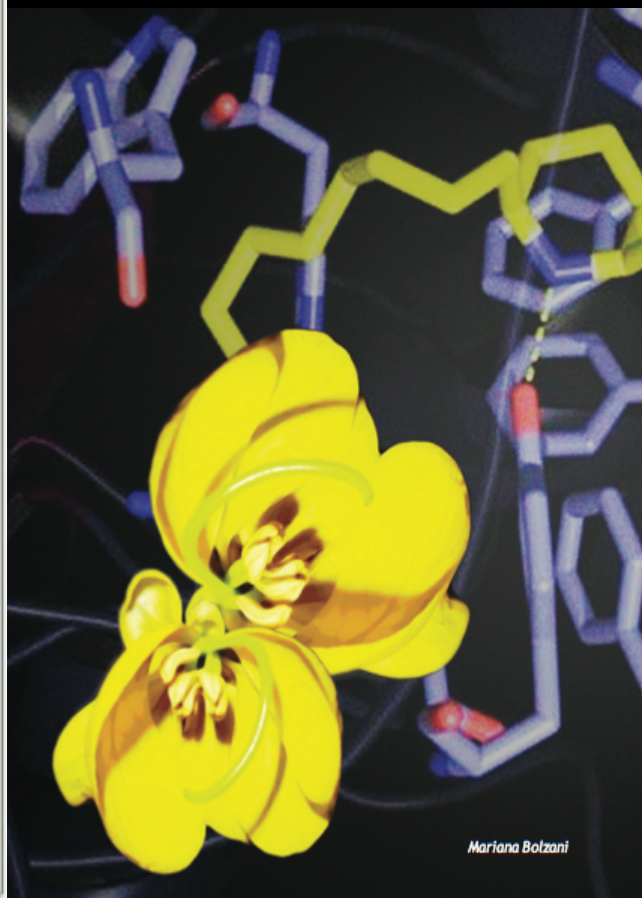
## Educational Interests:

- Dissemination of the importance of Chemistry and Biodiversity for high school students, aiming to stimulate the interest and enthusiasm of young people for life sciences;

## Additional Information:

- Has been dedicating efforts in the UNESP to create a research environment focused on innovation;
- Has dedicate efforts joint to Brazilian industries to build an environment of research and innovation focused on the development of products from Brazilian biodiversity.

(-)-cassine, a piperidine alkaloid from flowers of *Senna spectabilis* starting material for the synthesis of acetylcholinesterase inhibitors





Stephanie L. Brock

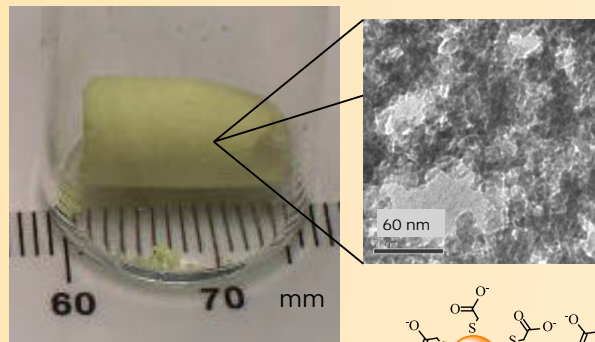
B.S. Chemistry, 1990, University of Washington; Ph.D. Chemistry, 1995, U.C. Davis

Professor of Chemistry, Wayne State University, Detroit, MI, USA

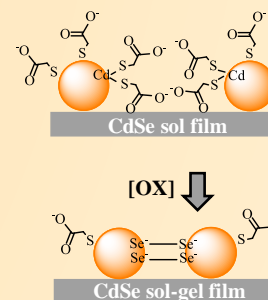
## Research Activities

I. Assembly of metal chalcogenide quantum dots into functional architectures for energy and the environment

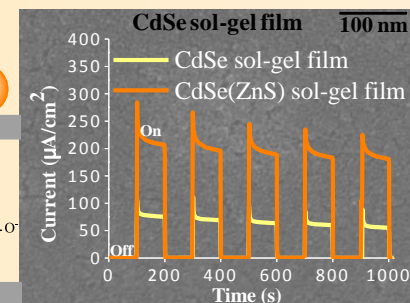
II. Synthesis of metal phosphide and arsenide nanoparticles for magnetic and catalytic applications



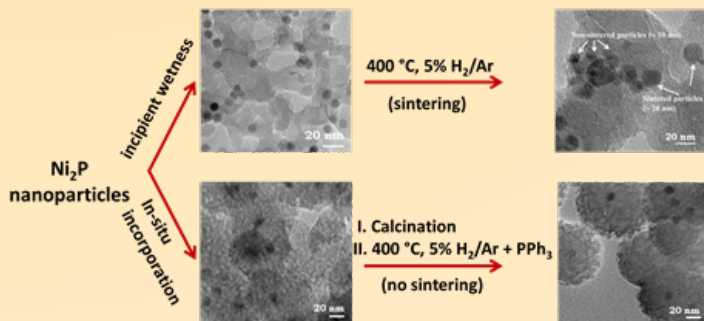
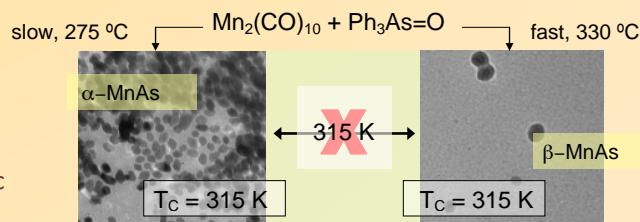
J. L. Mohanan, I. U. Arachchige, S. L. Brock, "Porous Semiconductor Chalcogenide Aerogels," *Science*, **2005**, 307, 397-401.



L. Korala, Z. Wang, Y. Liu, S. Maldonado, S. L. Brock "Uniform Thin Films of CdSe and CdSe(ZnS) Core(shell) Quantum Dots by Sol-Gel Assembly: Enabling Photoelectrochemical Characterization and Electronic Applications" *ACS Nano*, in press



K. Senevirathne, R. Tackett, P. Kharel, G. Lawes, K. Somaskandan, S. L. Brock "Discrete, Dispersible MnAs Nanocrystals from Solution Methods: Phase Control on the Nanoscale and Magnetic Consequences" *ACS Nano*, **2009**, 3, 1129-1138.



G. Layan Savithra, R. Bowker, B. Carrillo, M. Bussell, S. L. Brock "Rational Design of Nickel Phosphide Hydrodesulfurization Catalysts: Controlling Particle Size and Preventing Sintering" *Chem. Mater.* in revision

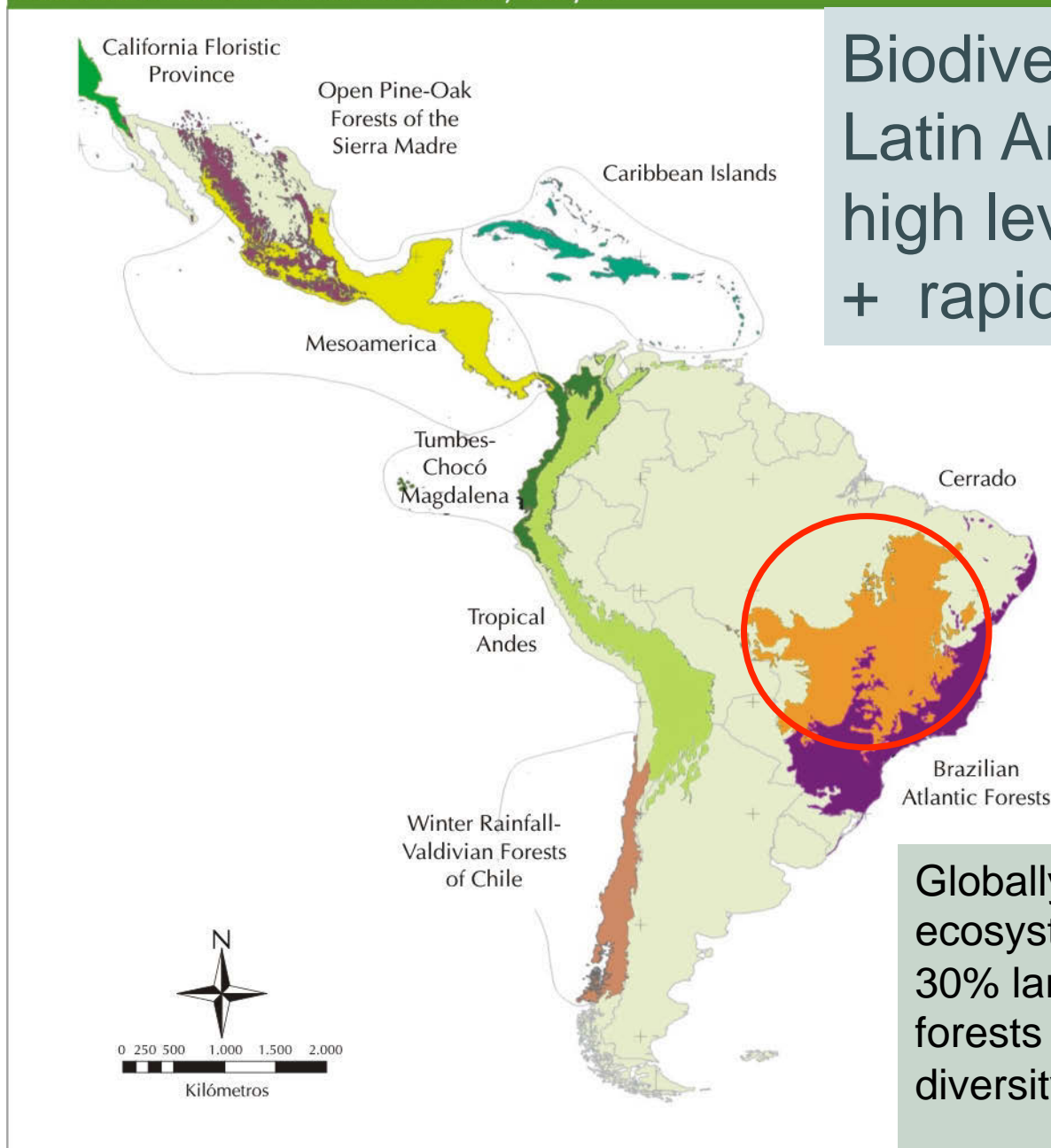
## Outreach Activities



Metro Detroit girls participate in GO-GIRLS Go Material Girls, a one-day outreach event where they made liquid crystals (LCs), created LC thermometers, and engaged in a game of "Materials Bingo" to test the knowledge gained over the course of the day.



## Latin America and the Caribbean: Biodiversity Hotspots



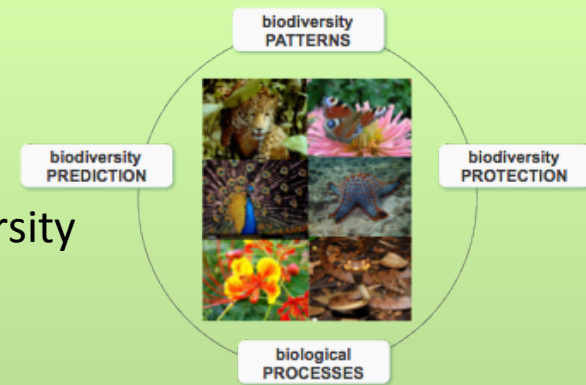
Biodiversity hotspots in Latin America = high levels of endemisms + rapid loss of habitats

Brazilian Cerrado

Globally, tropical savanna ecosystems cover an area nearly 30% larger than the area of tropical forests and present high biological diversity at different levels and scales.

Name: Ana Carolina O. Q. Carnaval  
Ph.D., Evolutionary Biology  
Assistant Professor, City University of New York

Research Interests & Accomplishments: Improvement of biodiversity prediction in understudied, threatened ecosystems (focus on tropical forests).



Educational Interests: Field-based experiences for NYC undergraduates; international undergraduate training programs.

Other Information about you: Lead a heavily female-biased lab – and apparently am called “the boss lady” by the male students in my department.



National Science Foundation  
WHERE DISCOVERIES BEGIN

# Environmental Hydrometallurgy

Virginia Ciminelli

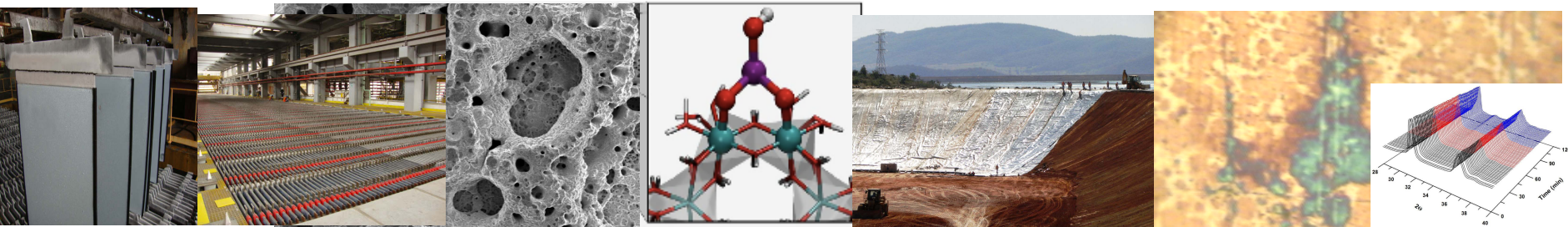
*Thermodynamic, kinetics and molecular modeling of dissolution, sorption, electrowinning reactions applied to gold and base metal extraction and effluent treatment.*

**Speciation and molecular modeling** of arsenic in environmental samples (soils, dust, food, water), to assess **toxicity** and to evaluate and control **arsenic stability**. **Environmental and health risk assessment** in **mining areas**, improving management of **large volumes** of **wastes**.

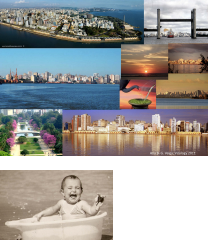
**Investigation** of the **nature** and **effect** of **organic groups** on the **electrochemical mechanism**, **crystal growth**, **mechanical properties** of the **zinc deposit** and on **industrial performance parameters**.

**Identification** of process options for **cyanide recovery** from mining effluents. Identification of the **sorption mechanism** of metal cyanide species on **activated carbon** and polymeric **ion exchange resins**.

**Electrochemical, chemical and molecular modeling** of metal **sulfide oxidation** (chalcopyrite, pyrite, arsenopyrite) in the context of **acid mine drainage** and **metal extraction**.







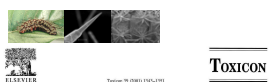
# Ana Beatriz Gorini da Veiga

UFCSPA, Porto Alegre, Brazil

anabgv@ufcspa.edu.br

Born June 3<sup>rd</sup>, 1976 in Santa Catarina, Brazil

- Parents Biologists and Professors



Structures involved in production, secretion and injection of the venom produced by the caterpillar *Lononia obliqua* (Lepidoptera, Saturniidae)

A.B.G. Veiga<sup>1</sup>, B. Bischoff<sup>1</sup>, J.A. Guimarães<sup>2\*</sup>

<sup>1</sup>Unidade de Biologia, Universidade Federal do Rio Grande do Sul (UFRGS), Av. Itália, 11.915, 91240-900, Porto Alegre, RS, Brazil

<sup>2</sup>Unidade de Biologia, Universidade Federal do Rio Grande do Sul (UFRGS), Av. Itália, 11.915, 91240-900, Porto Alegre, RS, Brazil

Received 15 May 2005; accepted 15 August 2005

Available online at www.sciencedirect.com

ScienceDirect

GENE

A catalog for the transcripts from the venomous structures of the caterpillar *Lononia obliqua*: Identification of the proteins potentially involved in the coagulation disorder and hemorrhagic syndrome

Ana B.G. Veiga<sup>1</sup>, José M.C. Ribeiro<sup>1</sup>, Jorge A. Guimarães<sup>2</sup>, M.B. Francisco<sup>2\*</sup>

<sup>1</sup>Unidade de Biologia, Universidade Federal do Rio Grande do Sul (UFRGS), Av. Itália, 11.915, 91240-900, Porto Alegre, RS, Brazil

<sup>2</sup>Unidade de Biologia, Universidade Federal do Rio Grande do Sul (UFRGS), Av. Itália, 11.915, 91240-900, Porto Alegre, RS, Brazil

Received 15 May 2005; accepted 15 August 2005

Available online at www.sciencedirect.com

ScienceDirect

Antitropical venoms and cancer

Tago Elias Heinen<sup>1</sup>, Ana Beatriz Gorini da Veiga<sup>1\*</sup>

<sup>1</sup>Unidade de Biologia, Universidade Federal do Rio Grande do Sul (UFRGS), Av. Itália, 11.915, 91240-900, Porto Alegre, RS, Brazil

Received 15 May 2005; accepted 15 August 2005

Available online at www.sciencedirect.com

ScienceDirect

Antiviral Research

Expression of an antiviral protein from *Lononia obliqua* hemolymph in baculovirus-insect cell system

A.C.V. Carmo<sup>1</sup>, D.N.S. Giovanni<sup>1</sup>, T.P. Cunha<sup>1</sup>, L.M. Martins<sup>1</sup>, R.C. Sacco<sup>1</sup>, CAT. Suen<sup>1</sup>, R.H.V. Moraes<sup>1</sup>, A.B.G. Veiga<sup>1</sup>, K.Z. Mendonça<sup>1\*</sup>

<sup>1</sup>Unidade de Biologia, Universidade Federal do Rio Grande do Sul (UFRGS), Av. Itália, 11.915, 91240-900, Porto Alegre, RS, Brazil

Received 15 May 2005; accepted 15 August 2005

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ScienceDirect

Autonomic Neuroscience: Basic and Clinical

Hypercholesterolemia magnitude increases sympathetic modulation and exhalation in LGE knockout mice

José S. Daugherty<sup>1</sup>, Karina Tabata Goul<sup>1</sup>, Cristina Gomes<sup>1</sup>, Gláucia De Aguiar<sup>1</sup>, Ana B.G. Veiga<sup>1</sup>, Carlos Ribeiro<sup>1</sup>

<sup>1</sup>Unidade de Biologia, Universidade Federal do Rio Grande do Sul (UFRGS), Av. Itália, 11.915, 91240-900, Porto Alegre, RS, Brazil

Received 15 May 2005; accepted 15 August 2005

Available online at www.sciencedirect.com

ScienceDirect

Behavioral Brain Research

Analysis of transcriptional levels of the oxytocin receptor in different areas of the central nervous system and behavior in high and low licking rats

Carina Antez Rethelings<sup>1</sup>, Gabriela Alkass<sup>1</sup>, Virginia Mungai Lapan<sup>1</sup>, Isabela Osipova Becker<sup>1</sup>, Ana Carolina de Moura<sup>1</sup>, Ana Maria de Moura Lapan<sup>1</sup>, Ana Beatriz Gorini da Veiga<sup>1\*</sup>, Maria Conceição<sup>1</sup>

<sup>1</sup>Unidade de Biologia, Universidade Federal do Rio Grande do Sul (UFRGS), Av. Itália, 11.915, 91240-900, Porto Alegre, RS, Brazil

Received 15 May 2005; accepted 15 August 2005

Available online at www.sciencedirect.com

ScienceDirect

ORIGINAL RESEARCH

Effects of *Lononia obliqua* caterpillar venom upon the proliferation and viability of cell lines

Tago Elias Heinen<sup>1</sup>, Caroline Brunetto de Farias<sup>1</sup>, Ana Lucia Albuquerque<sup>1</sup>, Ronaldo Zacatelli Mendonça<sup>1</sup>, Rafael Becker<sup>1</sup>, Ana Beatriz Gorini da Veiga<sup>1</sup>

<sup>1</sup>Unidade de Biologia, Universidade Federal do Rio Grande do Sul (UFRGS), Av. Itália, 11.915, 91240-900, Porto Alegre, RS, Brazil

Received 15 May 2005; accepted 15 August 2005

Available online at www.sciencedirect.com

ScienceDirect

Bioinformatics - Medicine

Viral Load and Epidemiological Profile of Patients Infected by Pandemic Influenza A (H1N1) 2009 and Seasonal Influenza A Virus in Southern Brazil

Ana Beatriz Gorini da Veiga<sup>1</sup>, Nilton Alexandre Reisbom<sup>2</sup>, Laura Trevisan Cordeiro<sup>3</sup>, Alexandre Matt Goulart<sup>4</sup>, Rafael Becker<sup>5</sup>, Patricia de Aguiar<sup>6</sup>, Fernando Matias<sup>7</sup>, Tatiana Schaffer Gregolin<sup>8</sup>, and Pedro Alves de Azevedo<sup>9</sup>

<sup>1</sup>Unidade de Biologia, Universidade Federal do Rio Grande do Sul (UFRGS), Av. Itália, 11.915, 91240-900, Porto Alegre, RS, Brazil

Bachelor Degree in Biological Sciences and in Cellular, Molecular and Functional Biology at the Federal University of Rio Grande do Sul (UFRGS)

Master Degree in Cellular and Molecular Biology, UFRGS

Doctor Degree in Sciences: Cellular and Molecular Biology, UFRGS

Fellowship at NIH - USA

Research on anti-hemostatic principles from venoms

Awarded Young Investigator Prize in 1999 – UFRGS.

Awarded Young Scientist Prize in 2005 – Ministry of S&T, Brazil



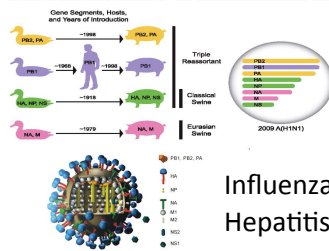
Honorable Mention PhD Thesis Award 2005, CAPES  
S&T Prize Award – Porto Alegre  
Science Award – Rio Grande do Sul

2006: Universidade Federal de Ciências da Saúde de Porto Alegre

Associate Professor,

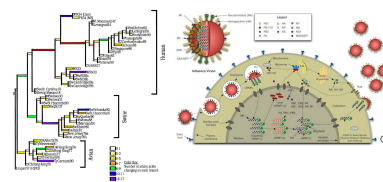
Molecular Biology, Bioinformatics, Molecular Virology, Toxins

Research on Human Pathogenic Viruses



Analyses of viral genomics combined with clinical data to  
stand viral evolution and host-pathogen interactions

Influenza A and other respiratory viruses  
Hepatitis  
Yellow Fever



Bioinformatics Applied to Health Sciences

Learning tools for Molecular Biology and Bioinformatics Education

Graduate Programs: Pathology; Medicine: Hepatology

3 master students

3 PhD students

2 pos-docs

2 Undergrads



Coordinator of the Center for Technology Innovation in Health

Intellectual Property, Technology Transfer

Stimulate intellectual property rights, patenting, author's rights

Inventions from the University turn up into innovation in the market

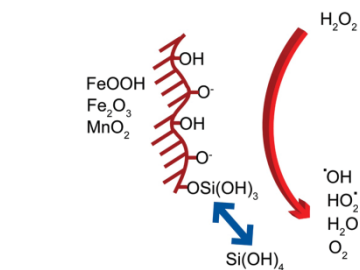
Collaborations with other Public and Private Institutions and Enterprises



# Fiona M. Doyle

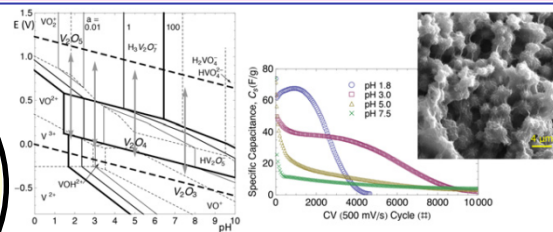
Executive Associate Dean and Donald H. McLaughlin Professor of Mineral Engineering,  
College of Engineering,  
University of California, Berkeley

M.A. Natural Sciences, Univ. Cambridge, 1982  
M.Sc. Extractive Metallurgy Imperial College, London,  
1979  
Ph.D., Hydrometallurgy, Imperial College, London, 1983

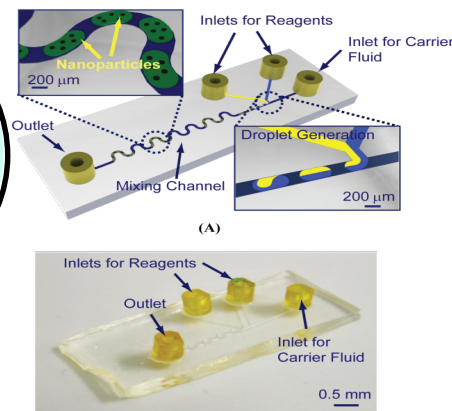


Role of minerals in activation of oxidizers for remediation

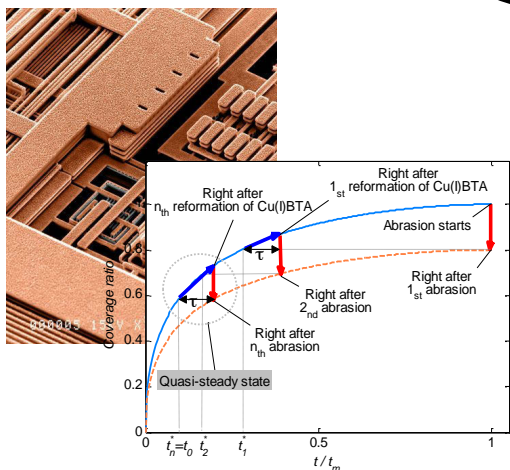
Nano-structured vanadium oxide based capacitors



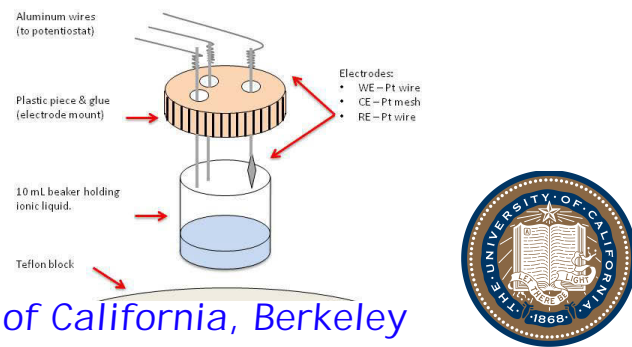
Microfluidic reactors for synthesizing nanoparticles



Chemical Mechanical Planarization



Alternative processing for rare earths



# Denise Croce Romano Espinosa



## *Educational Background*

Metallurgical Engineer, University of Sao Paulo (1995)

MSc. Metallurgical Engineering, University of Sao Paulo (1998)

- Co-processing of galvanic sludge

PhD Metallurgical Engineering, University of Sao Paulo (2002)

- Battery recycling



## *Current Appointment*

Associate Professor

Department of Metallurgical and Materials Engineering

University of Sao Paulo

## Research Interests & Accomplishments:

[www.pmt.usp.br/larex](http://www.pmt.usp.br/larex)



### ***Recycling and Waste Treatment***

- Aluminum, batteries, waste of eletro and electronic equipment
- Solid waste: recycling and reuse of steelmaking dusts and slags. Co-processing of solid wastes

### ***Extractive Metallurgy***

- extraction of metals
- general ore and waste hydrometallurgical processing
- bioleaching of printed circuit boards
- solvent extraction of metals from solutions obtained from the leaching of ores and wastes.



# Delphine Farmer

PhD (Chemistry, UC Berkeley) ; MS (Environmental Studies, UC Berkeley), BS (Chemistry, McGill University)

Current Appointment: **Assistant Professor of Chemistry, Colorado State University**



Atmospheric Chemistry: How do interactions between forest ecosystems, human air pollution and atmospheric chemistry affect air quality and climate?

Pesticides in the atmosphere: Developing new instruments to study the fate of pesticides

Analytical chemistry: Developing new ways to measure compounds in the atmosphere

Field sites: California, Brazil, Finland, Alabama!



Education & Outreach: Environmental science programs in underprivileged communities; undergraduate & graduate classes in environmental chemistry

Also... I am a trapeze dancer in my spare time, love to cook, and I love to travel to new places and take lots of photographs!



Maria Fatima Grossi de Sa - Doctor Es Science, Molecular Biology, Paris VII University, France  
Researcher at EMBRAPA Genetic Resources and Biotechnology and Professor at Catholic  
University of Brasilia – Brasília-DF-Brazil

**Research Interests & Accomplishments:**

Plant Biotechnology, Functional Genomics: Biotic and Abiotic Stresses in Plants, Plant-Pest Molecular Interactions, Plant Genetic Engineering , Bioprospection of genes and proteins applied to agribusiness , Recombinant proteins applied to the pharmaceutical industry and agribusiness, Bioprospection of secondary metabolites for pests control

**Educational Interests (optional):**

Biotechnology Training Courses , Biotechnology Innovation, Plant Molecular Biology

**Other Information about you:**

Has put effort into actions for the development of the Biotechnology in Brazil and encouraging the partnership between Academy and Bioindustry.

# Bioprospection of plant nematotoxic compounds

## 1 Healthy crop



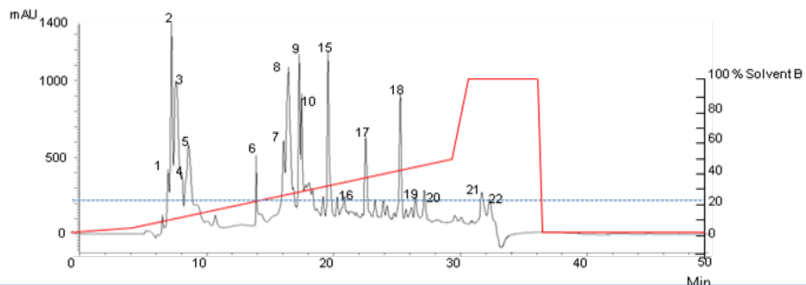
## 2 Nematode infection



## 3 Antagonistic plant



## 4 Purification / HPLC / C18 Reverse phase



## 7 Different chemical classes

Sugar

Fatty acid

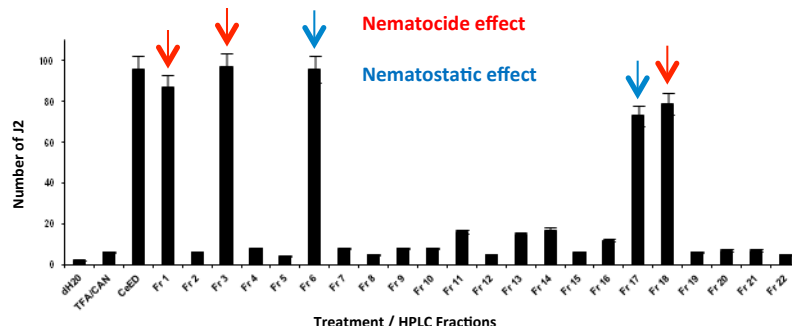
No proteogenic aminoacid

Toxin

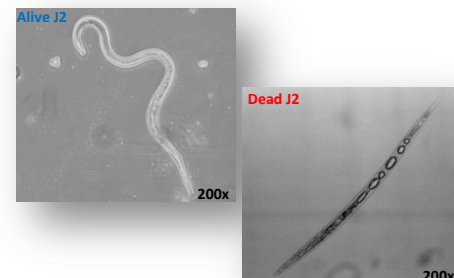
Organic acid

Aminoacid

## 5 Nematode bioassay / *Meloidogyne incognita*



## 8 Optical Microscopy



Compounds effects after 48 hours exposure

## 6 Metabolite profiling

GC - EI - MS

LC - ESI - QqTOF - MS

<sup>1</sup>H NMR



LITERATURE SEARCH

## 9

PATENTS

APPLICATION

Nanotechnology

Metabolite engineering





# Laboratory of macromolecular engineering

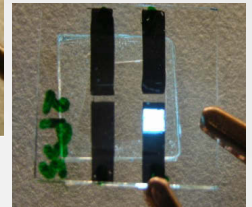
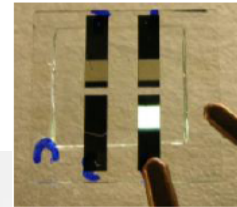
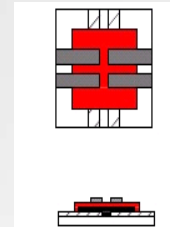
## Dr. Wang Shu Hui



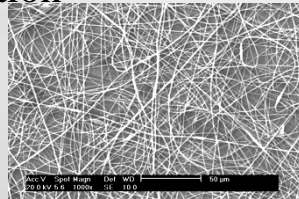
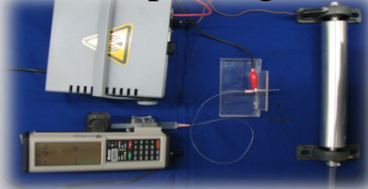
- **Research objectives:** *Polymers for sustainable technologies; OLEDs; PSCs; biodegradable polymer materials; polymer materials recycling*

## Selected research projects

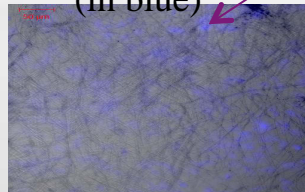
- Nanostructured composite materials for OLEDs and PSCs
- Development of hybrid materials for organic light-emitting devices and polymer solar cells
  - Biodegradable polymer nanocomposites
  - Development of biodegradable materials for medical/ pharmaceutical uses and non-recyclable wrappings



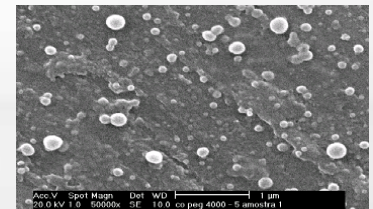
Electrospinning of solution



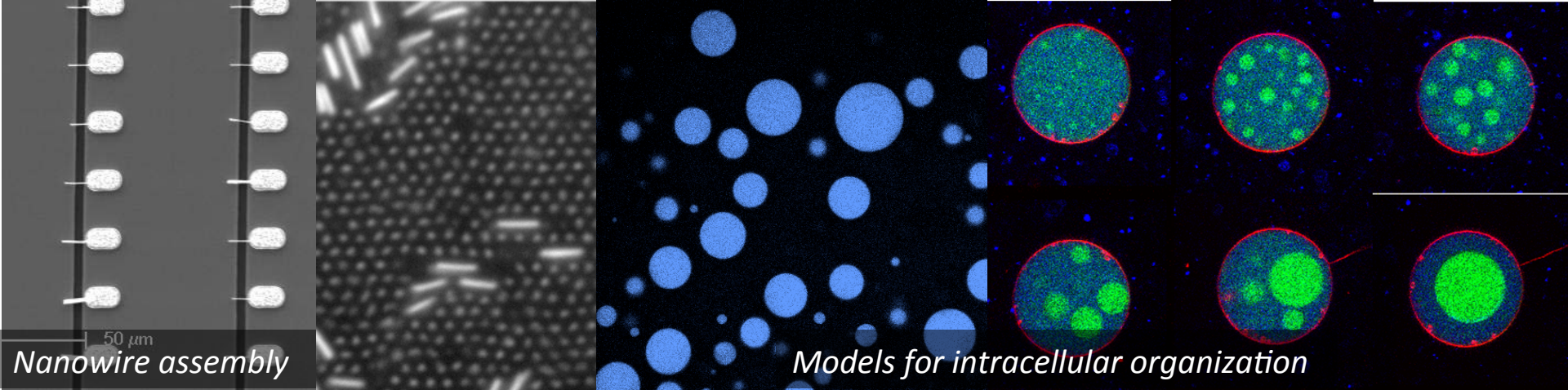
Sheep aortic valve cells  
(in blue)



Polymer  
nanospheres



Escola Politécnica  
da USP



## Chris Keating

*Educational Background:* B.S. Chemistry & Biology, St. Francis College; REU @ Syracuse Univ.  
Ph.D. Chemistry, Penn State University (University Park, PA, USA)

*Current Appointment:* Professor of Chemistry, Penn State University

*Research Interests:* Colloid and interface chemistry, artificial cells, soft matter, particle assembly





## Kimberly Kelly

Educational Background: BA in Chemistry Hamilton College, PhD Oncological Sciences HCI/Uof Utah

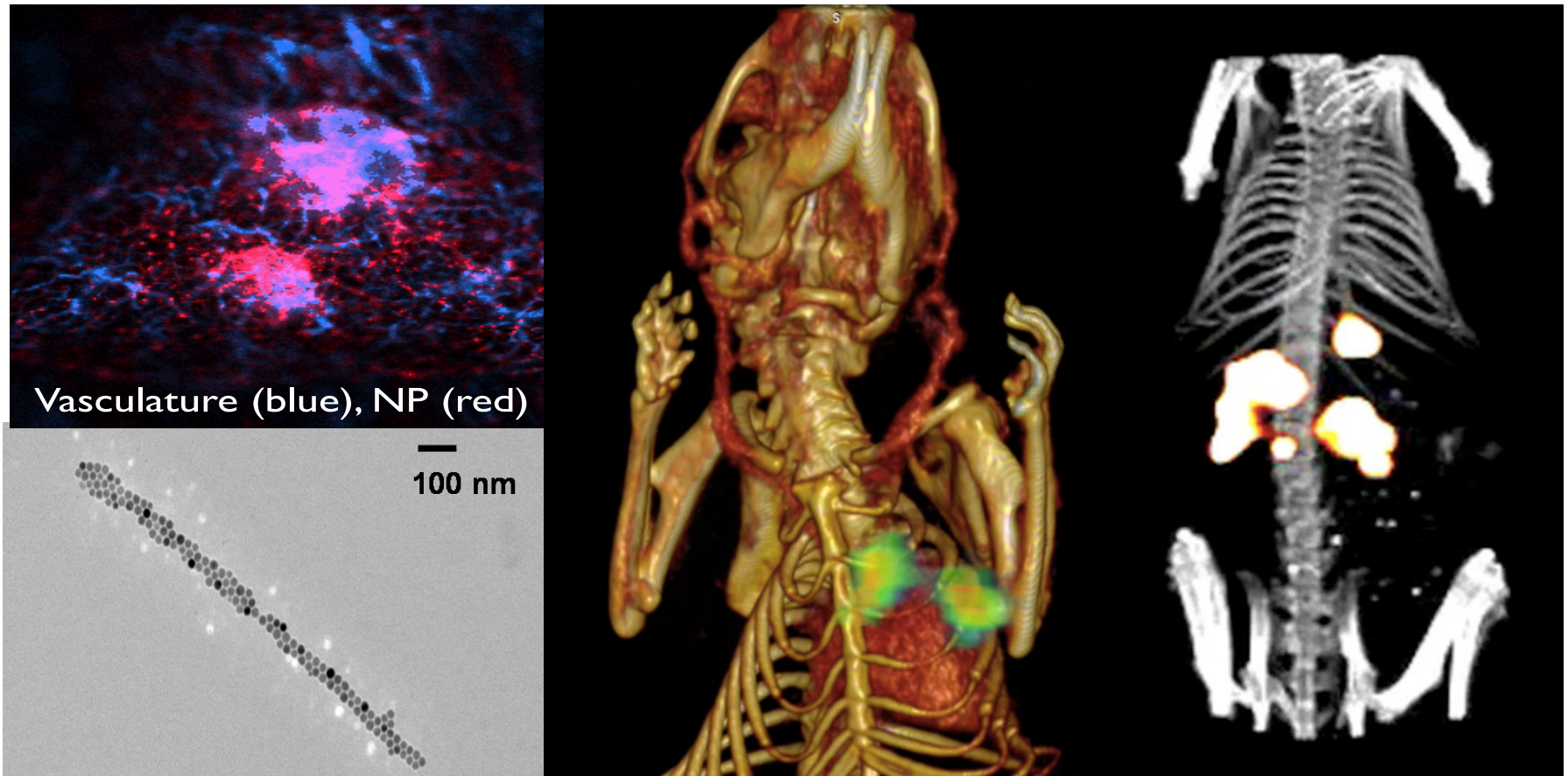
Current Appointment: Associate Professor in Biomedical Engineering

### Research Interests:

Molecularly Targeted Imaging agents and drug delivery, target identification, pancreatic ductal adenocarcinoma

### Other Information about you:

Mother of 4 children, Cheerleading coach, Learning to Speak German



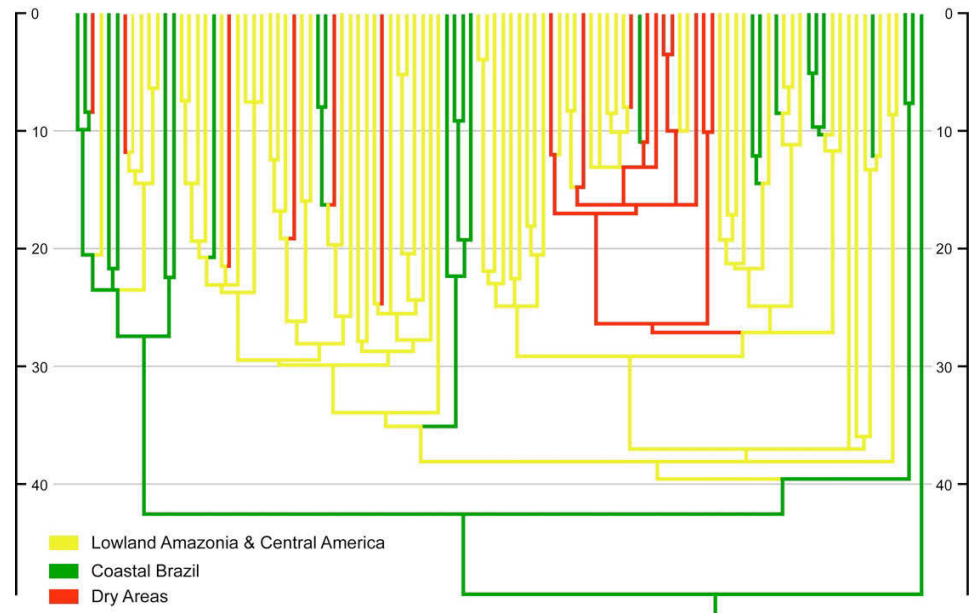


**Name:** Lúcia G. Lohmann

**Background:** Ph.D. in Systematics, Ecology & Evolution, UM-St. Louis, USA.

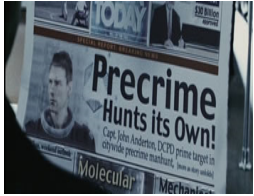
**Current Appointment:** Assistant Professor at the Universidade de São Paulo, Botany Department.

**Research Interests:** My research integrates components of ecology, evolutionary biology, systematics, paleontology, and molecular biology to further understand patterns of plant evolution and biogeography in the Tropics.



# Optoelectronics & Integration: Dr. Leda Lunardi

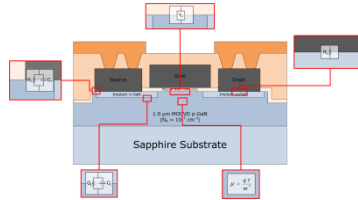
## Transparent Electronics



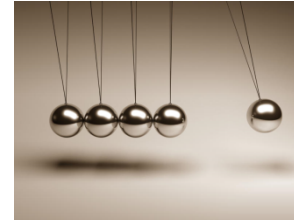
## Biomedical Sensors



## CAD modeling



## Energy Harvesting



**Research Focus:** Implementing materials and designing building blocks where silicon-based devices cannot provide solutions (performance speed, wavelength, or power).

- Optimizing the physical device description
- Fast rate logic circuits with thin film transistors
- High dielectric dual metal micro electro mechanical systems (MEMS)



## Educational Activities

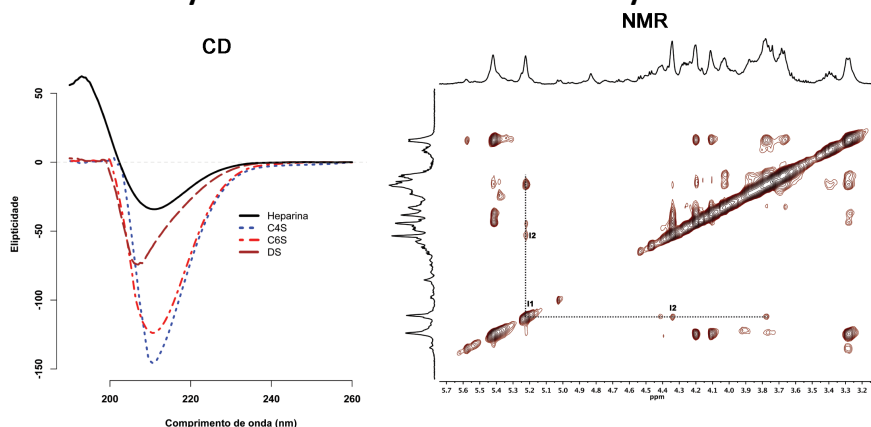
(REU)-Site "Engineering the Grid"



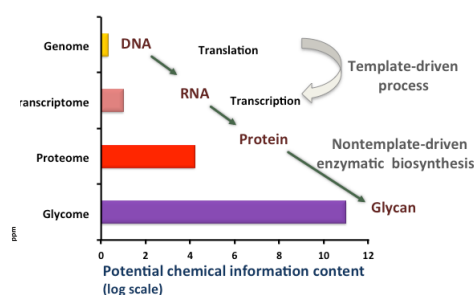
## Glycosaminoglycans: structure and biological functions.

The goal of our group is the understanding of the structure, function and pharmacological activities of glycosaminoglycans (GAGs) and proteoglycans. The development of new methodologies for the separation and analysis of the different GAGs, together with the characterization of different enzymes involved in the degradation of these compounds, chemical and physicochemical analysis of the fragments and of the native polymers allowed to detect, identify and determine the structural characteristics of the GAGs as well as to propose some biological and pharmacological roles for these compounds. In order to understand the role of GAGs, our group used a wide spectrum of approaches, going from morphological methods to the molecular level, from plants to humans. More recently, our group is involved in the role of heparin and heparinomimetics, including heparan sulfate, in angiogenesis and tumor formation.

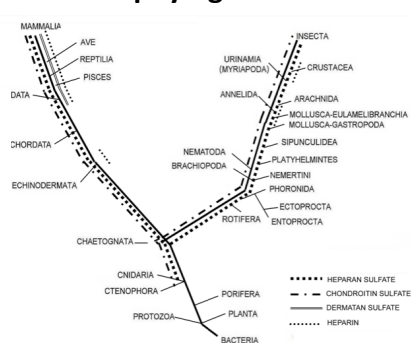
### Analytical methods for structural analysis of GAGs



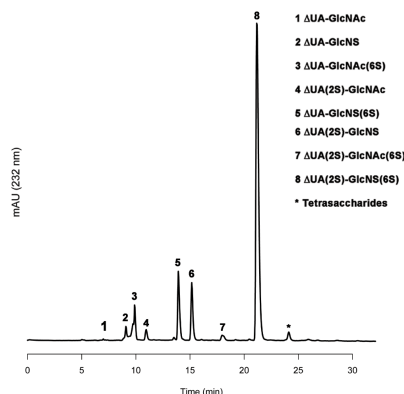
### Information in macromolecules<sup>1</sup>



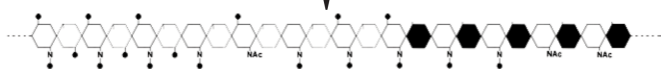
### Molecular phylogenetics of GAGs



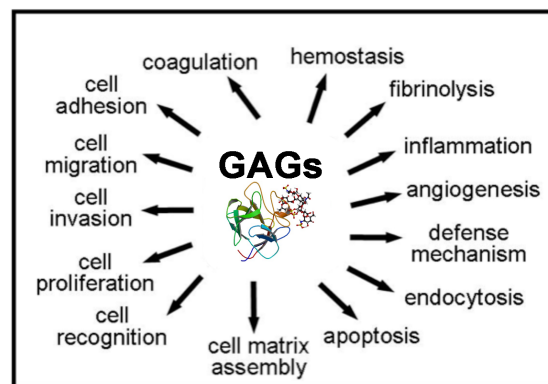
### Chromatography



### Structural elucidation



### Biological functions of GAGs



<sup>1</sup>adapted from <http://topologicococeans.wordpress.com/2012/04/>



# DENISE DE M. NEDDERMEYER

Educational Background: Majored in Arts, Certificate in Art Education, Msc in Policy Studies in Education, PhD in Sociology of Knowledge

Current Appointment: Director of International Affairs of CAPES/MEC

Research Interests & Accomplishments: Main areas of interest are policy making in Education and Professional Development, International Cooperation, Graduate Education, International Mobility, Education Abroad, Capacity Building in Science Technology and STEM fields.

Educational Interests: educational reforms towards building up capacity linked to effective teaching in K-12 schools in the STEM fields. She is engaged in strengthening an academic network of sustainable collaboration between Brazilian and American faculty, research and institutions.

Other information about me:  
English Teacher (K - 12)





Ofelia Olivero

MS zoology, Ph.D. cytogenetics, ATS toxicology

Senior Staff Scientist, National Cancer Institute, NIH

NATIONAL<sup>®</sup>  
CANCER  
INSTITUTE

## Interests-(HATS)

### The Scientist:

- Carcinogenesis, environmental pollutants and human health impact.
- Use of therapeutic drugs that affect human health in particularly during pregnancy.
- Fetal damage by anti-aids drugs

### The Mentor:

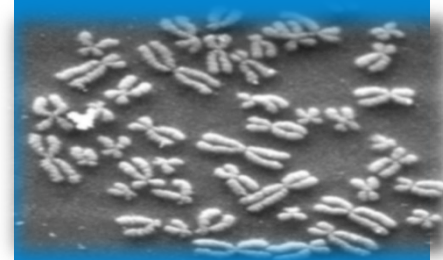
- Mentoring, particularly new form of mentoring regarding the science of the future: interdisciplinary research.
- The science of team science
- Empowerment of minority students

### The Leader:

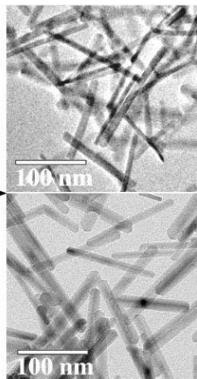
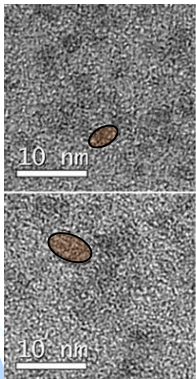
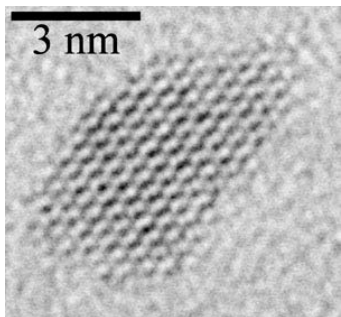
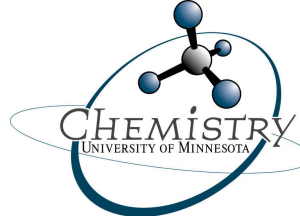
- Involved in Hispanic/Minority Organizations
- Leadership Positions in Scientific Organizations

### The woman:

- Wife, mother, facilitator, yoga practitioner, concert hall usher



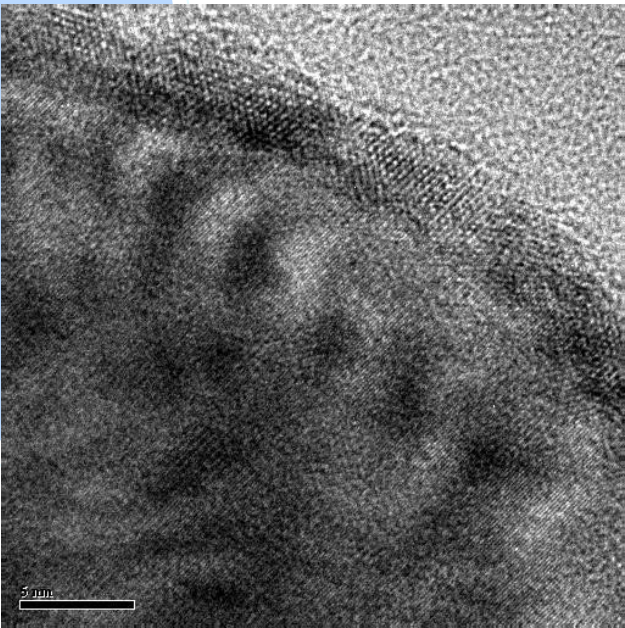
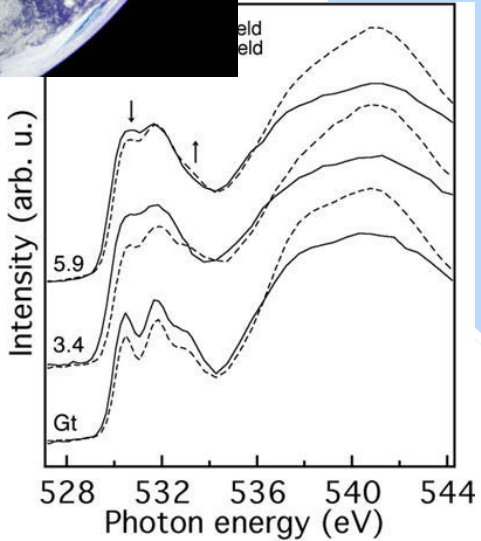
R. Lee Penn, Chemistry  
University of Minnesota – Twin Cities



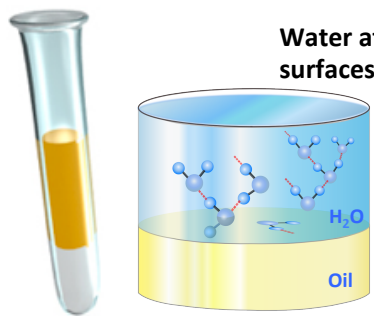
Environmental Chemistry  
Pollutant Degradation  
Geochemical Cycling of  
Elements

Nanoparticle Synthesis:  
Controlled Size,  
Microstructure,  
Morphology, and  
properties

Nanoparticle Properties:  
Reactivity, Magnetism, Aggregation,  
and Transport



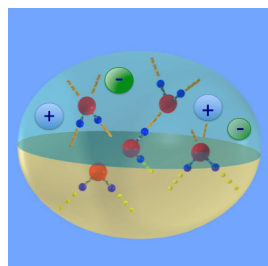
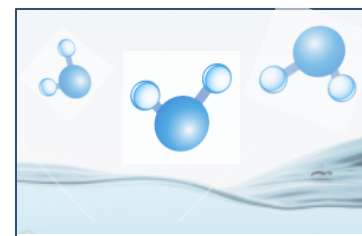




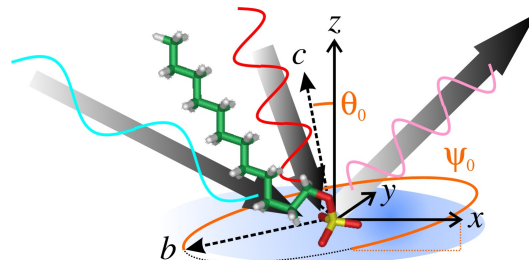
Water at hydrophobic surfaces

**Geri Richmond**  
**Professor of Chemistry, Univ. of Oregon**  
**Ph.D: Physical Chemistry**  
**BS: Chemistry**

H-bonding and structure at vapor-water interfaces

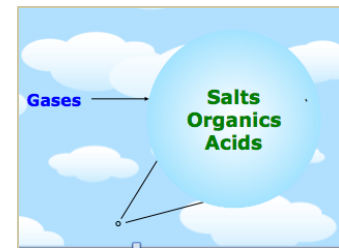


Ion adsorption and transport at organic/aqueous interfaces

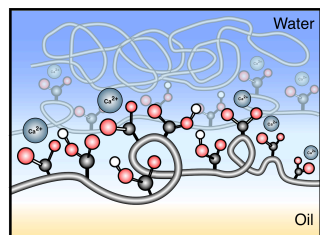


Experimental and theoretical studies of:

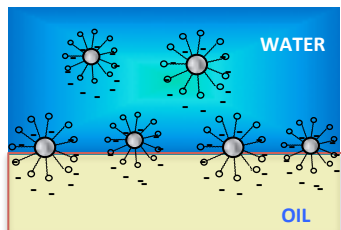
Structure and chemistry of model aerosol surfaces



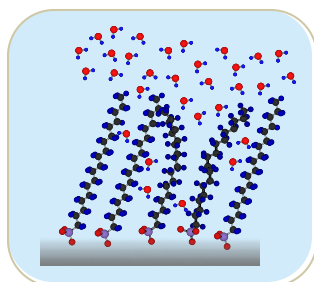
Polyelectrolyte assembly at oil/water interfaces



Nanoparticle assembly

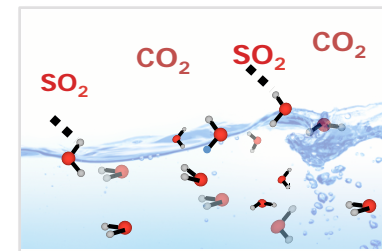


Photocarrier dynamics of solar active materials

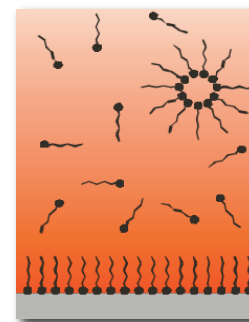


Thin film growth on semiconductor and mineral surfaces

Gaseous adsorption and reactivity at water surfaces



Surface chemistry of strong acid solutions



Structure and dynamics of surfactant and phospholipid adsorption

•**Name:** Sara Teresinha Olalla Saad ; born in Sao Paulo, 06/19/1956

**Educational Background:**

1974-1979 - *medical school* \_ Jundiaí

1980-1983- *residence* in internal medicine and hematology-hemotherapy-  
University of São Paulo – Ribeirão Preto

1983-1989- *Master* and *PhD* in Medicine, University of Campinas

1990-1992- *pos-doc*: St Elizabeth's Hospital- Tufts and Beth Israel- Harvard-  
biochemistry and molecular biology

1999 jan-jul- *pos-doc* Hopital St Louis – Paris : gene therapy



**Current Appointment:**

Full professor Hematology-Hemotherapy, Internal Medicine Department, School Of Medicine; - University of Campinas;

Director of Center of Hematology and Hemotherapy – University of Campinas;

Coordinator of National Institute of Blood (INCT) supported by National Council of Research (CNPq) and Sao Paulo Foundation for Research (FAPESP)

**Research Interests & Accomplishments: chronic anemias – clinical and molecular-**

**Educational Interests:** internal medicine, research fellow training , including graduating and undergraduating students

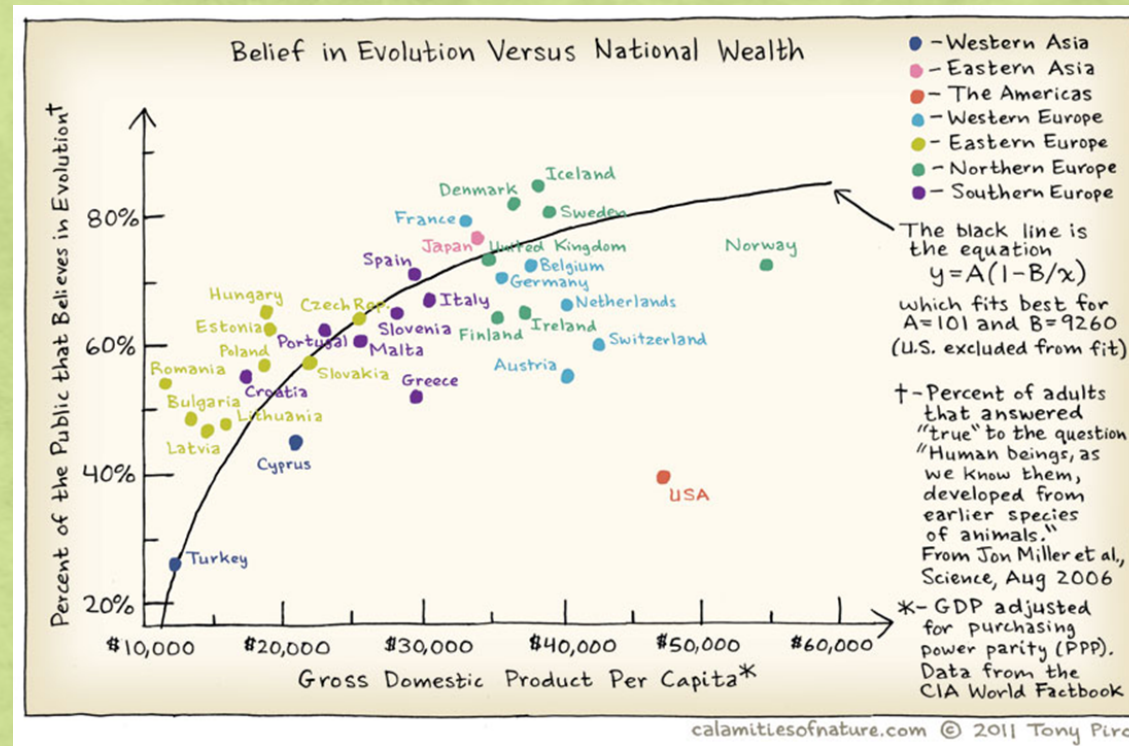
**Other Informations:** 2 daughters ( 30 and 27 yo) , divorced

- Published more than 200 papers in the last 20 years, with an impact factor of at least 1,5 each, some in journals such as *Blood*, *Journal Biological Chemistry*, *Nature Genetics*, etc.

- Collaboration with physicists ( photonics ) – for cell analysis, chemistries for protein characterization, engineers for biomaterial setup for stem cell grow, cell biologists , biochemistries, pharmacologists

- Supervisor of 18 master thesis , 19PhD, 13 pos-doc, 38 undergraduating students in research training





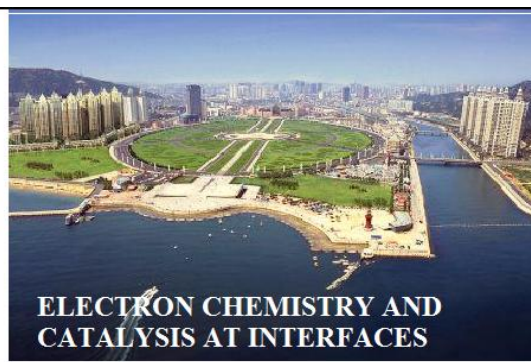
# Cynthia L. Sagers

Professor, Biological Sciences  
Associate Vice Provost for Research  
University of Arkansas

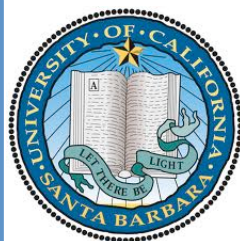
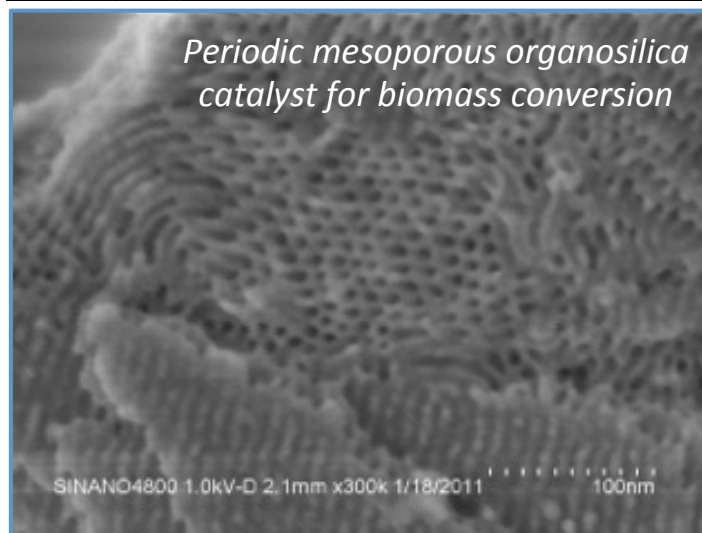


## Susannah Scott

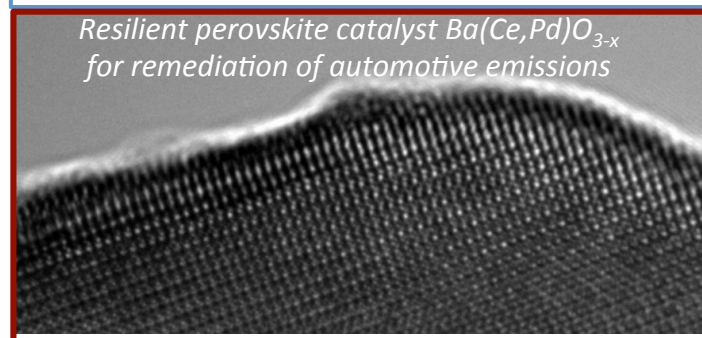
B.Sc. Chemistry (Canada), Ph.D. Inorganic Chemistry (Iowa State Univ., USA), Postdoc Catalysis (France)  
Professor of Chemical Engineering; Professor of Chemistry & Biochemistry, University of California-Santa Barbara



### China Technology Transfer Study Tour



## CENTER FOR THE SUSTAINABLE USE OF RENEWABLE FEEDSTOCKS



Joe and Bethany  
in Nanjing



First-generation college students  
studying engineering at UCSB



# Supapan Seraphin

Educational Background: Ph.D. in Materials Science and Engineering, Arizona State University;  
M.S. Energy Technology; B.Sc. Chemistry

Current Appointment: Professor, Dept. of Materials Science & Engineering, U of Arizona, Tucson, AZ85721  
Joint appointments: Optical Sciences College and Agriculture and Life Sciences College  
Director, University Spectroscopy and Imaging Facilities (USIF)

## Research Interests & Accomplishments:

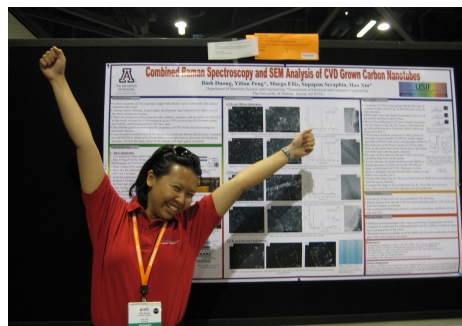
- Carbon nanotubes and nanoclusters
- Silicon-on-insulator
- Various ceramic and magnetic nanoparticles
- Catalysts
- Preg-robbing carbon in gold minerals
- White, yellow, red chalks in Master drawings

## HONORS AND AWARDS

- Fulbright Fellowship, 2011-2012
- Ben Bell's Award, Tucson 2011
- Science and Engineering Excellent Award, U of Arizona 2009
- Da Vinci Fellow, College of Engineering 2007-2009
- Outstanding Faculty Award, UA Asian American Faculty, Staff, Alumni Association 2007
- University of Arizona Faculty Fellow 2001 - present
- College of Engineering, U of Arizona, Award for Excellence at the Student Interface 2001, 2002, 2009
- NSF Committee of Visitors to review the DMR April 2002
- Rotary Ambassador, University Teacher Grant, 2001
- MSE Department Award for Outstanding Teaching, 1997
- Fellow, Alfred P. Sloan Foundation, 1993
- Presidential Student Scholar, EM Soc. of America, 1989

## Educational Interests: NSF grants-

- REU/RET Site and International REU/RET Site
- Gender Equity Program
- GK-12 Track 1 and 2
- Revealing the Invisible Universe: from Nanoscope to Telescope- MPS Internships in Public Science Education



Binh Duong received best poster award at Microscopy and Microanalysis 2008



Ben Bell's award for Seraphin



REU Thailand 2007

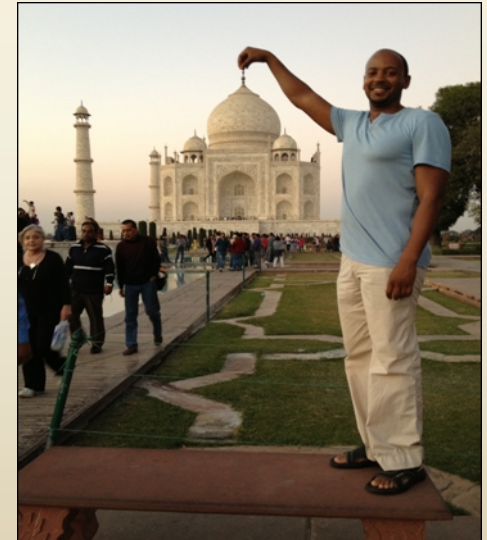


REU Thailand 2008

## Youth in Science at Rio+20



## Advancing Women in Science & Technology in India





Current Appointment: Associate Professor at the Department of Physical-Chemistry at UFRGS



# Jean Stockard, Professor Emerita, University of Oregon

- Education: BA (Mathematics and Sociology), MA (Sociology), PhD (Sociology)

Research: Sociology of gender, including evaluation of COACH projects; social networks; environmental sociology; sociology of education, health, and leisure

Taught in planning and public policy department - social planning, international issues, disaster management.

- Granddaughter, Ava Mae.

