

2009 nanobio

June 22 - 24
San Francisco
Airport Crown Plaza

THE 3ND INTERNATIONAL CONGRESS OF NANOBIOTECHNOLOGY & NANOMEDICINE



International Association
of Nanotechnology

www.nanobio2009.com



CALIFORNIA
INSTITUTE OF
NANOTECHNOLOGY

Keynote Speaker

Tuesday June 23, 2009 at 9:30 AM

Prof. Douglas D. Osheroff

Nobel Laureate 1996



“Accelerating the research & business of NanoBio”

IAnano



The 3rd International Congress of Nanobiotechnology & Nanomedicine 2009

San Francisco Airport Crowne Plaza

San Francisco, California, USA

<http://www.ianano.org>

<http://www.nanobio2009.com>

The NanoBio 2009™ Conference Theme:

“Accelerating Research & Business of Nanobiotechnology”

Nanobiotechnology is a specialized field of nanotechnology, focusing on the improved and novel physical, chemical, and biological properties of materials at the nanoscale.

Nanomedicine has potential impact on the prevention, early and reliable diagnosis and treatment of diseases. Scientists have developed analytical tools to examine the biological cells in great details. We now understand how biological structures function in general intracellular level. However, we still do not know how to build nanostructures or “nano” biomachines that are compatible with living tissues, so that they safely operate inside the body. Once these questions are answered, we will be able to design better diagnostic tools and engineer structures for better treatments of diseases.

The NanoBio 2009 conference will feature the state-of-the-art scientific development, as well as business and investment opportunities in the emerging NanoBio industry.

CONFERENCE TOPICS

- Targeted nano delivery systems
- Minimally invasive diagnostic methods
- Nanobio structural modeling
- Regenerative nanomedicine
- Nanobiological assemblies
- Nanoscale medical imaging
- Bio-detection & bio-sensing
- Nanotoxicology
- Nanoformulations
- Nanoscience & stem cell research
- NanoSafety & environmental impacts
- Technology transfer & strategic alliance and other related topics

Dear Colleague,

I am pleased to welcome you to the Third International Congress of Nanobiotechnology & Nanomedicine 2009 (NanoBio 2009).

Nanobiotechnology has expanded horizon of scientific inquiry using novel physical, chemical and biological properties of nanomaterials for potential applications in drug discovery, drug delivery systems, medical diagnosis and treatment of infectious diseases, cancer, cardiovascular and neurological disorders.

NanoBio 2009 will serve as a forum for nanotechnologists and business executives from around the world to collaborate in an increasing inter-connected global villages for furthering the advancement of medical research. Your contribution and participation is needed to help us all to achieve our mission.

The program has been designed to help you expand your knowledge and gain insights into some of the latest scientific breakthroughs and business opportunities highlight challenging projects which require international collaboration. This emerging industry will need the support of a new generation of researchers and business leaders that can transform conceptual ideas in the laboratory into products and services to meet the needs in the biomedical market place.

I would like to thank our program committee, volunteers, and our many colleagues who have done so much to make this year's conference a success. I hope all of you who are participating in the conference will find NanoBio 2009 an enriching experience. We welcome your help and suggestions for future meetings.

I hope you enjoy this beautiful city and find the program, papers, and workshops inspiring and valuable.

With warmest regards,

Lloyd L. Tran

Program Chair, NanoBio 2009

Director, California Institute of Nanotech

President, International Association of Nanotechnology

INTERNATIONAL ASSOCIATION OF NANOTECHNOLOGY



1290 Parkmoor Ave.
San Jose, CA 95126 USA
Tel: 408-280-6222
Fax: 408-280-6255
Email: info@ianano.org
<http://www.ianano.org>

We are a non-profit organization with the goals to foster scientific research and business development in the areas of Nanoscience and Nanotechnology for benefits of society.

PROGRAM AT A GLANCE



Monday June 22, 2009

8:00 AM-5:00 PM	Registration
9:00 AM-12:00 PM	Workshop 1 Introduction to Nanobiotech & Nanomedicine
	Workshop 2 Introduction to Carbon Nanotubes
	Workshop 3 Nanoparticle Formulation: principles and applications- Part 1
12:00 PM-2:00 PM	Lunch on your own
2:00 PM-5:00 PM	Workshop 4 Technology Transfer in Nanomedicine
	Workshop 5 NanoSafety Workshop-with the EPA
	Workshop 6 Nanoparticle Formulation: principles and applications- Part 2

Tuesday June 23, 2009

7:30 AM-4:00 PM	Registration
7:30 AM-8:30 AM	Breakfast
8:30 AM-12:00 PM	General Sessions
	Welcoming Remarks from the Program Chair
	Keynote Lectures
	Invited Lectures
12:30 PM-1:30 PM	Lunch Poster Presentations Networking Opportunity
1:30 PM-5:15 PM	Breakout Sessions
	Track A Advanced Scientific Research - A
	Track B Advanced Scientific Research - B
4:00 PM-7:00 PM	Mini Job Fair & Networking Opportunity
5:30 PM-7:00 PM	Reception & Poster Presentation Contest

Wednesday June 24, 2009

7:30 AM-4:00 PM	Registration
7:30 AM-8:30 AM	Breakfast
8:30 AM-12:00 PM	General Sessions
	Welcoming Remarks from the Program Chair
	Keynote Lectures
	Invited Lectures
12:30 PM-1:30 PM	Lunch
1:30 PM-5:15 PM	Breakout Sessions
	Track A Advanced Scientific Research - A
	Track B Advanced Scientific Research - B

Thursday June 25, 2009

8:00 AM-12:30 PM	Tour Visit 1: Molecular Foundry- Lawrence Berkeley National Laboratory
12:30 PM-1:30 PM	Lunch on your own
1:30 PM-5:30 PM	Tour Visit 2: Stanford University Nano Fabrication and Nano Characterization Lab

Poster Presentation Contest **SUBMIT YOUR VOTE!**

Make sure you visit our poster presentations and vote for your favorite poster! Ballots must be submitted to the registration desk by **6:30 PM on Tuesday, June 23, 2009**.
Limit one ballot per registrant.

2009 nanobio Robert Hooke Awards



SPONSORED BY



<http://www.cinano.com>

The California Institute of Nanotechnology's mission is to conduct research and development in the frontier of nanotechnology with its wide spectrum of applications, while serving a nanotechnology workforce training institute to meet the needs of the growing industry.

INVITED LECTURES



Keynote Speaker:

Douglas D. Osheroff

Professor of Physics and Applied Physics, Stanford University

Nobel Laureate, Physics 1996

Will deliver a keynote lecture on *“How Advances in Science are Made”*



Paul Alivisatos

Acting Director
Lawrence Berkeley National Lab, CA, USA



Thomas Webster

Associate Professor
of Engineering and Orthopaedics,
Brown University, RI, USA



Christopher Murphy

Professor
Comparative Ophthalmology,
School of Medicine and
Veterinary Medicine,
UC Davis, CA, USA



Kenneth Aldrich

Chairman, CEO
International Stem Cell Corporation, CA, USA



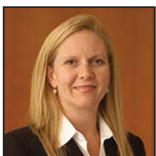
Steven Conolly

Associate Professor,
Department of Bio-Engineering
University of California, Berkeley, CA, USA



Chris Ackerson

Assistant Professor of Chemistry,
Colorado State University, CO, USA



Amy Fink

Partner
Howrey LLP, Los Angeles, CA, USA



Shyni Varghese

Assistant Professor
University of California, San Diego, CA, USA



Anil Patri

Deputy Director, Nanotechnology
Characterization Laboratory
SAIC Frederick, Inc. National Cancer
Institute at Frederick, MD, USA



David Schaffer

Professor, Chemical Engineering & Bioengineering
The Helen Willis Neuroscience Institute
Co-Director, Berkeley Stem Cell Center
University of California - Berkeley, CA, USA



D.K. Dhawan

Professor, Biophysics
Panjab University, Chandigarh, INDIA



Eugene Seymour

CEO,
NanoViricides, West Haven, CT, USA



Cattien Nguyen,
Senior Scientist,
NASA Ames Research Center, CA, USA



Gang-yu Liu

Professor
Department of Chemistry,
University of California, Davis, CA, USA



Marya Postner

Partner,
Cooley Godward Kronish, LLP, Palo Alto,
CA, USA



Zev Bryant

Assistant Professor
Stanford University Schools
of Engineering and Medicine,
Stanford CA, USA



Monday, June 22, 2009

The Conference Schedule may be subject to changes

MONDAY JUNE 22, 2009

8:00 AM-5:30 PM	Registration	9:30 AM-10:15 AM T-G-3
9:00 AM-12:00 PM	Workshop 1: Introduction to Nanobiotech & Nanomedicine Thomas Webster , Associate Professor of Engineering and Orthopaedics, Brown University, RI, USA	10:15 AM-10:30 AM
9:00 AM-12:00 PM	Workshop 2: Introduction to Carbon Nanotubes Cattien Nguyen , Senior Scientist, NASA Ames Research Center, CA, USA	10:30 AM-11:00 AM T-G-4
9:00 AM-12:00 PM	Workshop 3: Nanoparticle Formulation: principles and applications Eugene Seymour , CEO, NanoViricides, CT, USA David Owen , CTO, Starpharma, Melbourne, Australia Chris Ackerson , Assistant Professor of Chemistry, Colorado State University, CO, USA	11:00 AM-11:30 AM T-G-5
12:00 PM-2:00 PM	Lunch on your own	11:30 AM-12:00 PM T-G-6
2:00 PM-5:00 PM	Workshop 4: Technology Transfer in Nanomedicine Kathleen McCowin , Licensing Officer, UC Berkeley, CA USA Earl Weinstein , Assistant Director, Business Development and Licensing, UCLA Office of Intellectual Property, CA USA Marya Postner , Partner, Cooley Godward Kronish, LLP, CA USA	12:00 PM-12:30 PM T-G-7
2:00 PM-5:00 PM	Workshop 5: NanoSafety Workshop with the EPA Jeff Wong , Chief Scientist of the Department of Toxic Substance Control and Cal-EPA	12:30 PM-1:30 PM
2:00 PM-5:00 PM	Workshop 6: Nanoparticle Formulation: principles and applications - continued Eugene Seymour , CEO, NanoViricides, West Haven, CT, USA David Owen , CTO, Starpharma, Melbourne Australia Chris Ackerson , Assistant Professor of Chemistry, Colorado State University, CO, USA	TUESDAY PM 1:30 PM-2:00 PM T-A-1

Keynote Speaker: **Douglas D. Osheroff**
Nobel laureate in Physics 1996
Professor - Stanford University, CA, USA
"How Advances In Science Are Made"

Morning Break

Steven Conolly, Associate Professor, Department of Bio-Engineering - University of California, Berkeley, CA, USA
"Magnetic Particle Imaging"

Vera G. Pomelova, Nikolay S. Osin
Laboratory of Molecular Diagnostics, Department of Biomicroassay of State Research Center State R&D Institute of Bioengineering, Moscow, RUSSIA
"NanoSize Phosphorescent Markers Based Microplate Microarray Technology for Serodiagnosis of Zoonotic Infections Transmitted by Ixodid Ticks"

Kenneth Aldrich, Chairman, CEO International Stem Cell Corporation, CA, USA

David Owen, Vice President & CTO Starpharma Holdings Ltd, Melbourne, AUSTRALIA

Lunch, Poster Presentation & Network Oppty

BREAKOUT SESSION - Track A

Eugene Seymour, NanoViricides, West Haven, CT, USA
"Nanotechnology-based targeted anti-viral therapeutics"

Stephan Schultes¹, Alexander Philipp², Manfred Ogris², Gerhard Winter¹, Ernst Wagner², Conrad Coester¹
¹ Ludwig Maximilians University, Department of Pharmacy, Pharmaceutical Technology and Biopharmaceutics, Munich, GERMANY
² Ludwig Maximilians University, Pharmaceutical Biology and Biotechnology, Munich, GERMANY
"From Endosomal Escape with Sandwich Nanoparticles to RNA-Interference"

Humphrey H. P. Yiu, Laurent Bouffier, Hong-Jun Niu, Matthew J. Rosseinsky
Department of Chemistry, The University of Liverpool, United Kingdom
"Novel Iron Oxide-Silica Nanocomposite Materials for Tissue-targeting Drug Delivery"

Afternoon Break

Khin Yin Win and Han Ming Yong
Institute of Materials Research and Engineering (IMRE), Singapore, SINGAPORE
"Fluorescent nanoparticles: the image-guided therapy tools"

S. A. Ferreira¹, M. Vilanova², F. M. Gama¹
¹IBB-Institute for Biotechnology and Bioengineering, Centre for Biological Engineering, Universidade do Minho, PORTUGAL
²ICBAS- Instituto de Ciências Biomédicas de Abel Salazar, Universidade do Porto, PORTUGAL
"Nanogel of Mannan as a Potential Vaccine Delivery System"

TUESDAY JUNE 23, 2009

7:30 AM-4:00 AM	Registration	3:00 PM-3:15 PM
7:30 AM-8:30 AM	Breakfast	3:15 PM-3:45 PM T-A-4
Tuesday AM (Plaza Ballroom, B and C)	General Session	3:45 PM-4:15 PM T-A-5
8:30 AM-9:00 AM T-G-1	Opening Remark from Lloyd L. Tran , Program Chair Director, California Institute of Nanotechnology President, International Association of Nanotechnology <i>"The State of Nano Bio 2009: Building Infrastructures for the Next Frontier"</i>	
9:00 AM-9:30AM T-G-2	Anil Patrick , Deputy Director, Nanotechnology Characterization Laboratory SAIC Frederick, Inc. National Cancer Institute at Frederick, Frederick, MD 21701 <i>"Resources for Clinical Translation of Nanomedicines"</i>	



Tuesday June 23, 2009

The Conference Schedule may be subject to changes

4:15 PM-4:45 PM T-A-6	<p>Nadia Anikeeva¹, Yuri Sykulev¹, E. James Delikatny² and Anatoliy V. Popov² ¹Thomas Jefferson University, Department of Microbiology & Immunology, Philadelphia, PA 19107, USA ²University of Pennsylvania, Department of Radiology, Philadelphia, PA 19104, USA <i>"Lipid-Based Nanoparticles for Targeted Delivery of Imaging Agents into Breast Cancer Cells and Cytotoxic T Lymphocytes"</i></p>	5:15 PM-5:45 PM T-B-8	<p>Evelyn Hu Jinton Corp. San Francisco, CA 94109 USA <i>"Survey of nanotechnologies in neurostimulation"</i></p>
4:45 PM-5:15 PM T-A-7	<p>Erik Pierstorff Biotic Laboratories, Inc., Culver City, CA, USA <i>"Polymer-based Thin Film Platform Technology for Therapeutic Delivery"</i></p>	5:45 PM-7:00 PM	Poster Contest, Mini Job Fair, Reception
4:00 PM-7:00 PM	Mini Job Fair, Networking Opportunity	WEDNESDAY JUNE 24, 2009	
5:30 PM-7:00 PM	Poster Contest, Reception	7:30 AM-4:00 AM	Registration
TUESDAY	BREAKOUT SESSION - Track B	7:30 AM-8:30 AM	Breakfast
1:30 PM-2:00 PM T-B-1	<p>Christopher Murphy Comparative Ophthalmology, School of Medicine and Veterinary Medicine, UC Davis, CA, USA <i>"The Modulation of Cell Behaviors by Nanoscale Topographic Cues"</i></p>	GENERAL SESSION	WEDNESDAY JUNE 24, 2009
2:00 PM-2:30 PM T-B-2	<p>Chris Ackerson Colorado State University, department of Chemistry, Fort Collins, CO, USA <i>"Magic Number Gold Clusters"</i></p>	8:45 AM-9:00 AM W-G-1	Opening Remark from Lloyd L. Tran , Program Chair.
2:30 PM-3:00 PM T-B-3	<p>Shyni Varghese University of California, San Diego, CA, USA <i>"Molecular tailoring of matrix interfacial properties to control stem cell functions"</i></p>	9:00 AM-9:30 AM W-G-2	<p>David Schaffer, Professor Chemical Engineering & Bioengineering The Helen Willis Neuroscience Institute Co-Director, Berkeley Stem Cell Center University of California - Berkeley, CA, USA <i>"Engineering Bioactive Materials to Understand and Control Stem Cell Function"</i></p>
3:00 PM-3:15 PM	Afternoon Break	9:30 AM-10:15 AM W-G-3	KEYNOTE: Paul Alivisatos , Acting Director Lawrence Berkeley National Lab, CA, USA
3:15 PM-3:45 PM T-B-4	<p>Yuksel Ikiz Pamukkale University, Kinikli-Denizli, TURKEY <i>"Filtration efficiencies of Pan/PVA electrospun nano fibers"</i></p>	10:15 AM-10:30 AM	Morning Break
3:45 PM-4:15 PM T-B-5	<p>Zev Bryant Stanford University Schools of Engineering and Medicine, CA, USA <i>"Physical Mechanisms of Biological Molecular Motors"</i></p>	10:30 AM-11:00 AM W-G-4	<p>Francesca Porta University of Milan, Milano, ITALY <i>"Gold Particles Stabilization by Cape Aloe Active Components"</i></p>
4:15 PM-4:45 PM T-B-6	<p>Patricia Nadworny^{1,2}, JianFei Wang³, Robert E. Burrell^{1,2} ¹Department of Chemical and Materials Engineering; University of Alberta, Edmonton, Alberta, CANADA ²Department of Biomedical Engineering; University of Alberta, Edmonton, Alberta, CANADA ³Department of Surgery; University of Alberta, Edmonton, Alberta, CANADA <i>"Anti-inflammatory/Pro-healing Properties of Nanosilver-Derived Solutions"</i></p>	11:00 AM-11:30 AM W-G-5	<p>D.K Dhawan^{1,2}, Pardeep Kumar¹ and Anshoo Malhotra² ¹Nuclear Medicine, CEAST, Panjab University, Chandigarh, INDIA ²Department of Biophysics, Panjab University, Chandigarh, INDIA <i>"Development of Stable, Economically Viable and Reusable Macroaggregates of Albumin for Lung Cancer"</i></p>
4:45 PM-5:15 PM T-B-7	<p>Aline Cerf¹, Gábor Molnár², Christophe Thibault¹ and Christophe Vieu¹ ¹ LAAS-CNRS, Toulouse University, 7 avenue du Colonel Roche 31077 Toulouse Cedex 4, FRANCE ² Laboratory of Coordination Chemistry of the CNRS UPR8241, Toulouse, FRANCE <i>"Towards High Sensitivity Detection of Single Nano-Objects"</i></p>	11:30 AM-12:00 PM W-G-6	<p>Gang-yu Liu^{1,2}, Zhao Deng¹, Valentin Lulevich¹, Huanyuan Chen³, Tiffany Zink², and Futong Liu³ ¹Department of Chemistry, University of California, Davis, CA, USA ²Biophysics Graduate Group, University of California, Davis, CA, USA ³Department of Dermatology, School of Medicine, University of California-Davis, CA, USA <i>"Engineered Nanostructures for Cellular Biology Research"</i></p>
		12:00 PM-12:30 PM W-G-7	<p>Amy Fink Howrey LLP, Los Angeles, CA 90071 USA <i>"Potential Insurance Coverage Issues Arising from Nanotechnology: Big Risks Could Come in Small Packages"</i></p>
		12:30 PM-1:30 PM	Lunch
		WEDNESDAY	BREAKOUT SESSION - Track A
		1:30 PM-2:00 PM W-A-1	<p>Mingjun Zhang Assoc. Prof. of Biomedical Engineering, University of Tennessee, Knoxville, TN, USA <i>"Nanoparticles Secreted From Biological Systems"</i></p>



Wednesday June 24, 2009

The Conference Schedule may be subject to changes

2:00 PM-2:30 PM	<p>Nguyen TK Thanh The Davy-Faraday Research Laboratory, The Royal Institute of Great Britain, London, United Kingdom <i>"Tunable Shapes of Magnetic Nanoparticles: Fe-Pt, Fe-Pd and Fe-Pt-Pd Alloys"</i></p>	2:00 PM-2:30 PM W-B-2	<p>Rodion Belosludov, Hiroshi Mizuseki, Yoshiyuki Kawazoe Institute for Materials Research, Sendai, Japan <i>"Metal-Organic Framework Materials for Stereo-Selective Separation: Theoretical Study"</i></p>
2:30 PM-3:00 PM W-A-3	<p>Sarah Cooper Founder and former CTO of TE-Bio, LLC, Division of Biophan Technologies, USA <i>"NanoStructured high-efficiency thermoelectrics for medical implant power generation from the human body"</i></p>	2:30 PM-3:00 PM W-B-3	<p>Boitumelo Semete¹, Laetitia Booyen^{1,2}, Yolandy Lemmer^{1,3}, Lonji Kalombo¹, L Katata¹, Paul Chelule¹, Hulda. S Swai¹ ¹Council for Scientific and Industrial Research, Polymers and Bioceramics, Pretoria, 0001, South Africa ²Department of Pharmaceutics, North-West University, Potchefstroom Campus, Potchefstroom, 2520, South Africa ³Department of Biochemistry, University of Pretoria, Pretoria, 0001, South Africa <i>"Potential of improving the treatment of Tuberculosis through nanomedicine"</i></p>
3:00 PM-3:15 PM	Afternoon Break		
3:15 PM-3:45 PM W-A-4	<p>Z. Arslan, S. Baytak, S. Agachan, E. Russell, I. Farah, W. Yu, A. J. Bednar Chemistry Department, Jackson State University, Jackson, MS 39217 USA <i>"In vivo stability and bioaccumulation pattern of CdSe nanoparticles on rats"</i></p>		
3:45 PM-4:15 PM W-A-5	<p>Yen-Shan Liu University of Louisiana at Lafayette, Chemical Engineering, Lafayette, LA, USA <i>"Fabrication and Use of a Nanocalorimeter for Thermal Screening of Highly Energetic Materials"</i></p>	3:00 PM-3:15 PM	Afternoon Break
4:15 PM-4:45 PM W-A-6	<p>Koji Kato,¹ Hideaki Tanaka,¹ Eiki Yamashita,¹ Tomoyuki Sumizawa², Zhou Yong³, Yao Min³, Kenji Iwasaki,¹ Masato Yoshimura,¹ and Tomitake Tsukihara^{1,4} ¹Institute for Protein Research, Osaka University, 3-2 Yamada-oka, Suita, 565-0871, Japan ²University of Occupational and Environmental Health, 1-1 Iseigaoka, Yahatanishi, Kitakyushu 807-0871, Japan ³Faculty of Advanced Life Sciences, Graduate School of Life Sciences, Hokkaido University, Sapporo 060-0810, Japan ⁴Department of Life Science, University of Hyogo, 3-2-1 Koto, Kamigori, Akoh, Hyogo 678-1297, Japan <i>"The Structure of Rat Liver Vault at 3.5 Angstrom Resolution"</i></p>	3:15 PM-3:45 PM W-B-4	<p>Marcato, PD¹, Melo, P.S.², Ferreira I.F.², Rossi-Bergmann, B³, Pinto, E.F.³, Durán N.¹ ¹Chemistry Institute, Universidade Estadual de Campinas, P.O.Box 6154, Campinas-SP, CEP 13083-970, Brazil ²Metropolitam Integrated Faculty of Campinas, Campus Swift, Brazil ³Biophysical Institute, Universidade Federal do Rio de Janeiro, Brazil <i>"Nanostructured Polymer and Lipid Carriers for Sunscreen Formulation: Preparation, Characterization and Application"</i></p>
4:45 PM-5:15 PM W-A-7	<p>Nefertiti Patrick^{1,2}, Ayele Gugssa¹, Julius Grant¹, Arthur Thorpe¹, Gary Harris¹, Winston Anderson¹, Bradford Orr² ¹Howard University Howard Nanoscale Science and Engineering Facility Washington, DC ²University of Michigan Applied Physics Department Ann Arbor, Michigan <i>"Cellular Encapsulation of Iron Oxide Nanoparticles and Magnetic Responsiveness of Prostate Cancer Cells for Subsequent Death by Hyperthermia"</i></p>	3:45 PM-4:15 PM W-B-5	<p>Jonathan Varsanik^{1,2}, William Teynor², J. LeBlanc², Heather Clark², and Jonathan Bernstein² ¹Massachusetts Institute of Technology, 77 Massachusetts Ave. Cambridge, MA 02139, USA ²Charles Stark Draper Laboratory, 555 Technology Square, Cambridge MA 02139, USA <i>"Fabrication of nanofluidic Sensor Chip with Sub-wavelength Plasmonic Readout for Optical Tags"</i></p>
5:15 PM	Conference Adjourned	4:15 PM-4:45 PM W-B-6	<p>Ye Hu University of Texas at Austin, Austin, TX, USA <i>"The Next Generation of Proteomic Nanochips in Biomarker Discovery"</i></p>
WEDNESDAY	BREAKOUT SESSION - Track B	5:15 PM	Conference Adjourned
1:30 PM-2:00 PM W-B-1	<p>Paresh Ray Jackson State University, Dept. of Chemistry, Jackson, MS, USA <i>"Gold Nanomaterial Based NSET Optical Ruler for Biological Application: Promises and Challenges"</i></p>		



Poster Presenters

Tuesday June 23, 2009 from 12:00 PM - 1:00 PM and 5:00 PM - 6:30 PM

Cui Haixin¹, Jiang Jianfang¹, Wu Donglai², Yang Tao²

¹Institute of Environment and Sustainable Development in Agriculture, Chinese Academy of Agricultural Sciences, Beijing 100081, China

²Harbin Veterinary Research Institute, Chinese Academy of Agricultural Sciences, Harbin 150001, Heilongjiang province, China
"Disinfection Efficiency of Nano-Cu₂+/TiO₂ on Avian Influenza Virus"

Patrick Goodwill, Gary Lee, Greig Scott, Pascal Stang, Steve Conolly

Department of Bioengineering, University of California, Berkeley, CA, UNITED STATES

"Direct Imaging of SPIOs in Mice using Magnetic Particle Imaging: Instrument Construction and 3d Imaging"

Yiota Gregoriou & David T. Cramb

University of Calgary, Alberta, Canada

"An Investigation of the Uptake Kinetics and Distribution of Quantum Dots in Chicken Embryonic Tissues"

Rakesh. K. Gupta

G.G.M Science College, Department of Electronics, Jammu Tawi, India

"Nanoelectronics: I-V Characteristics of DNA- Single-Electron Transistor different temperature Level."

Patricio Haberer

UTFSM, Valparaiso, Chile

"Synthesis of C nanostructured material"

Chalette Lambert¹ Stephen Carper²

¹Dept of Chemistry, Duke University, Durham, NC, USA

²Dept of Chemistry, University of Nevada, Las Vegas, N.V., USA

"Heat Shock Protein 27 Inhibits the Denaturation of Cytochrome C Bound to Gold Nanoparticles"

Andrew Lee

University of South Carolina, Columbia, SC USA

"Controlling cell behaviors at the nanoscale level with virus particles"

G.C. Lee, P. Goodwill, K. Phuong, B. Inglis, B. Hargreaves, and S. Conolly

UCSF/UCB Joint Bioengineering Graduate Group, Dept. of Bioengineering, UC Berkeley; Henry J. Wheeler, Jr.

Brain Imaging Center, UC Berkeley; Dept. of Radiology, Stanford University, USA

"Development of a Tissue Susceptibility Matched Pyrolytic Graphite Foam For Improved Frequency Selective Fat Suppression in Breast MRI"

Shenshen Li,¹ Xin-Quan Xin²

¹Michigan State University, Department of Chemistry, East Lansing, MI, USA;

²Nanjing University, Coordination Chemistry Institute, State Key Lab of Coordination Chemistry, Nanjing 210093, People's Republic of China

"Low Temperature Solid State Syntheses Of Manganese Oxide Nanomaterials With Controlled Valence States, Crystal Structures and Morphologies"

Nicole F. Steinmetz^{1,2}, Marianne E. Mertens^{1,3}, Rebecca E.

Taurog⁴, John E. Johnson⁴, Ulrich Commandeur³, Rainer

Fischer^{3,5,6}, and Marianne Manchester^{1,2,6}

¹Department of Cell Biology,

²Center of Integrative Molecular Biology, and

⁴Department of Molecular Biology,

The Scripps Research Institute, 10550 North Torrey Pines Road, La Jolla, CA 92037, USA;

³Institute for Biology VII (Molecular Biotechnology), RWTH Aachen University, Worringer Weg 1

⁵Fraunhofer Institute for Molecular Biology and Applied Ecology, Forckenbeckstrasse 6, 52074 Aachen, Germany

"Potato virus X as a novel platform for potential biomedical applications"

Nefertiti Patrick

Howard University, Washington, DC, USA

"Cellular encapsulation and magnetic response of iron oxide nanoparticles for death of prostate cancer cells by hyperthermia"

Arghya Paul and Satya Prakash

McGill University, Montreal, CANADA

"Efficient Gene Delivery to Mouse Brain Neuroblast Cells using Recombinant Viral Particles"

Daniel Pesantez

College of Nanoscale Science & Engineering, University at Albany

"Minimally-invasive metabolic microsensor for prospective allograft viability testing"

Stephan Schultes¹, Martin Eichhorn², Gerhard Winter¹, Conrad Coester¹

¹Ludwig Maximilians University, Department of Pharmacy, Pharmaceutical Technology and Biopharmaceutics, Munich, GERMANY

²Ludwig Maximilians University, Walter Brendel Center of Experimental Medicine, Munich, GERMANY

"Simulated in-vivo Endothelial Cell Adhesion of Cationic Polysaccharide-gelatin Nanoparticles"

Alexander V. Shtemenko¹ Dina E. Yegorova¹, Natalia I. Shtemenko²

¹Department of Inorganic Chemistry, Ukrainian State Chemical Technological University, Gagarina av.8, Dnipropetrovs'k 49005, Ukraine

²Department of Biophysics and Biochemistry, Dnipropetrovs'k National University, Dnipropetrovs'k, Ukraine.

"Preparation of Nanoliposomes and Solid Nanoparticles Including Rhenium Cluster Compounds"

Ian Robinson¹, Cameron Alexander², Le T. Lu¹, Le D. Tung¹, David G Fernig^{4,5}, and Nguyen TK Thanh^{1,4,5,6}

¹Department of Chemistry, University of Liverpool, Liverpool, L69 7ZD, UNITED KINGDOM

²School of Pharmacy, University of Nottingham, Nottingham, NG7 2RD, UNITED KINGDOM

³Department of Physics, University of Liverpool, Liverpool, Crown Street, L69 7ZD, UNITED KINGDOM

⁴School of Biological Sciences, University of Liverpool, Liverpool, L69 7ZB, UNITED KINGDOM

⁵Liverpool Institute of Nanoscale Science, Engineering & Technology (LINSET), University of Liverpool, Liverpool L69 7ZB, UNITED KINGDOM

⁶The Davy-Faraday Research Laboratory, The Royal Institution of Great Britain, 21 Albemarle Street, London W1S 4Bs, UNITED KINGDOM

"One-pot synthesis of monodisperse water soluble 'dual-responsive' magnetic nanoparticles"

Diane Ung¹, Le D. Tung², Gabriel Caruntu³, Dimitrios Delaportas⁴, Ioannis Alexandrou⁴, Ian A. Prior^{5,6}, and Nguyen T.K. Thanh^{1,6,7}

¹Department of Chemistry, University of Liverpool, Liverpool, L69 7ZD, UNITED KINGDOM

²Department of Physics, University of Liverpool, Liverpool, Crown Street, L69 7ZD, UNITED KINGDOM

³Advanced Materials Research Institute, University of New Orleans, New Orleans, LA 70148, USA

⁴Department of Electrical Engineering & Electronics, University of Liverpool, Liverpool, L69 3GJ, UNITED KINGDOM

⁵Physiological Laboratory, University of Liverpool, Liverpool L69 3BX, UNITED KINGDOM

⁶Liverpool Institute of Nanoscale Science, Engineering & Technology (LINSET), University of Liverpool, Liverpool L69 7ZB, UNITED KINGDOM

⁷The Davy-Faraday Research Laboratory, The Royal Institution of Great Britain, 21 Albemarle Street, London W1S 4Bs, UNITED KINGDOM

"A versatile approach for producing water stable magnetic nanoparticles: ligand exchange"

ANANO

Poster Presenters (continued)

Tuesday June 23, 2009 from 12:00 PM - 1:00 PM
and 5:00 PM - 6:30 PM

Le T. Lu¹, Ian Robinson¹, Le D. Tung², Bien Tan¹, James Long³, Andrew I Cooper¹, David G. Fernig^{4,5}, and Nguyen T.K. Thanh^{1,3,5,6}

¹ Department of Chemistry, University of Liverpool, Liverpool, L69 7ZD, UNITED KINGDOM

² Department of Physics, University of Liverpool, Liverpool, Crown Street, L69 7ZD, UNITED KINGDOM

³ Iota Nanosolutions Ltd, Liverpool, Crown Street, L69 7ZB, UNITED KINGDOM

⁴ School of Biological Sciences, University of Liverpool, Liverpool, L69 7ZB, UNITED KINGDOM

⁵ Liverpool Institute of Nanoscale Science, Engineering & Technology (LINSET), University of Liverpool, Liverpool L69 7ZB, UNITED KINGDOM

⁶ The Davy-Faraday Research Laboratory, The Royal Institution of Great Britain, 21 Albemarle Street, London W1S 4Bs, UNITED KINGDOM

"Size and shape control of water soluble magnetic cobalt nanoparticles synthesis"

Vaijayanthimala.V, Yan-Kai Tzeng, Chung-Leung Li and Huan-Cheng Chang

Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, Taiwan 106, R.O.C.

Molecular Science and Technology program, Taiwan International Graduate Program,

Academia Sinica, Taipei, Taiwan 106, R.O.C.

Department of Chemistry, National Tsing Hua University, Hsinchu, Taiwan 300, R.O.C.

Institute of Cellular and Organismic Biology, 128 Academia Road Section 2, Nankang,

Taipei, 115, Taiwan, R.O.C.

Genomics Research Center, 128 Academia Road Section 2, Nankang, Taipei, 115,

Taiwan, R.O.C.

"Biocompatibility of Fluorescent Nanodiamonds and their mechanism of cellular uptake"

Piyush Verma, Ben Almquist, Nick Melosh

Dept of Materials Science, Stanford University, Stanford, CA 94305, United States

"Biomimetic metallic electrodes for intracellular electrical measurements"

Moon-Young Yoon

Dept. of Chemistry, Hanyang University, Seoul, Korea

"Selection of DNA Aptamers that Bind High Affinity to Anthrax Heptameric PA63"



Tour: Lawrence Berkeley National Laboratory – The Molecular Foundry

Meet in front of the hotel no later than 8:00 AM.

Depart: 8:30 AM

Return: 12:30 PM

Fee: \$50

Space is limited. Check the registration desk for availability.

The Molecular Foundry is a DOE User Facility charged with providing support to nanoscience researchers in academic, government and industrial laboratories around the world. The Foundry provides users with instruments, techniques and collaborators to enhance their studies of the synthesis, characterization and theory of nanoscale materials. Its six facilities focus on both "soft" (biological and polymeric) and "hard" (inorganic and microfabricated) nanostructured building blocks, and their integration into complex functional assemblies.

<http://foundry.lbl.gov>



Tour: Stanford NanoFabrication Facility & Stanford NanoCharacterization Lab

Meet in front of the hotel no later than 1:30 PM.

Depart: 2:00 PM

Return: 5:30 PM

Fee: \$50

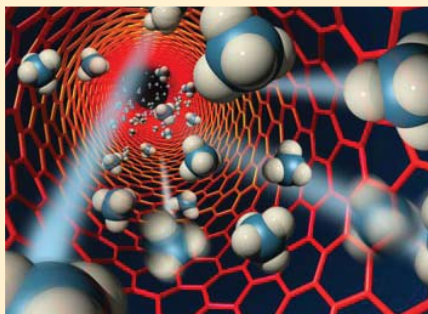
Space is limited. Check the registration desk for availability.

The Stanford Nanofabrication Facility laboratory is a shared, open-use resource serving academic, industrial, and governmental researchers across the country and around the globe. The SNF is more than just a lab; it is a vibrant community of researchers. Our lab members come from a wide variety of disciplines, with research in areas of optics, MEMS, biology, and chemistry, as well as process characterization and fabrication of more traditional electronics devices. We are especially committed to supporting use of Micro- and Nanofabrication technologies in non-traditional research applications. The SNF is supported by the National Science Foundation through the National Nanotechnology Infrastructure Network (NNIN).

<http://www.stanford.edu/group/snif>

2010
nanobio

June 21-23, 2010
San Francisco



California Institute of Nanotechnology

The California Institute of Nanotechnology's mission is to conduct research and development and provide professional education and training in the frontier of nanotechnology to meet the needs of the emerging industry for the benefit of the society. Our programs are funded by the U.S. Department of Labor to provide workforce training in nanotechnology.

Current Course Offerings:

Certified Nanotech CleanTech Professional (CNCP)

The Certified Nanotech CleanTech Professional Program includes lectures, group discussions and real life case studies in the industry. In addition to classroom based learning, the program includes weekly industry seminars featuring guest speakers and networking opportunities with prospective employers. The CNCP program also includes a laboratory practical component where students will become familiar with working on a sophisticated Scanning Electron Microscope, a "must-have" instrument in the nanotechnology industry. The certificate program prepares students for various positions such as lab technician, research assistant, project manager, sales engineer, marketing or consultant jobs in the nanotech/cleantech industry. In addition, the Green Zebra, will assist our graduates in their job search and placement through our network of industry partners.

Micro-Nano-Fabrication for Photovoltaics Workshop

The Micro-NanoFabrication for Photovoltaics Workshop is an intensive certificate program geared towards introducing technical and business managers to the applications of nanotechnology for photovoltaics. The program includes a hands-on lab component covering the basic principles and practice of micro-nano fabrication techniques applied to electronic devices. Throughout the course, participants will become trained in ultra high vacuum physical vapor deposition, lithography, etching and cleaning, metallization, and specimen characterization using scanning electron microscope (SEM). The objective of this course is to create your own photovoltaic cell.

Certified Photovoltaic Practitioner

The Certified Photovoltaic Practitioner (CCP) program is designed for those individuals wanting to get into the high-growth solar energy industry. The program provides basic knowledge comprehension and application of photovoltaic (solar electric) system operations. The CCP certificate prepares the student to pass the NABCEP Entry Level Certificate exam. The NABCEP Entry Level Certificate of Knowledge exam is based on a set of learning objectives developed by a NABCEP Committee of PV subject matter experts. Photovoltaic Energy Practitioners design and install solar panels on buildings. It's a highly technical process that involves a careful consideration of location and angles. The solar installer is also responsible for making sure the panels are properly connected to the building's electrical system and any "smart" two-way metering systems (which allow customers to get paid for surplus energy they generate) that may be present.

Apprenticeship in Nanotech & Clean Tech - Paid on the Job Training

This intensive program is designed to train a select number of CNCP graduates for internship opportunities in the high growth industries of nanotechnology and clean technology. The first phase of the Apprenticeship program is 8 weeks of formal classroom style learning at our San Jose location to equip you with basic scientific principles and hands on training with a Scanning Electron Microscope. Upon completion of the classes, we will setup placement in a one year paid on the job training with one of our partnering Silicon Valley Nanotech or Clean tech companies.



IAnano



Sponsors & Supporting Organizations

We acknowledge the support and generosity of the following organizations:



Intuitive Surgical is the global technology leader in robotic-assisted minimally invasive surgery. We are committed to the development of products designed to extend the benefits of minimally invasive surgery to the broadest possible range of patients. Intuitive Surgical is taking surgery beyond the limits of the human hand.™

<http://www.intuitivesurgical.com>



Biotic Laboratories, Inc. is a research & development company with the goal to develop technology in the area of implantable drug-eluting (releasing) films for the treatment of cancer, infectious and autoimmune diseases. The company's core technology relates to a proprietary, implantable thin-film for the controlled release of a wide variety of pharmaceuticals. This technology utilizes a polymer that is highly inert, non-toxic and has been implanted in the body for 20 years as a coating for implants.

<http://www.bioticlabs.com>



Neuro Biomed, Inc. is a bio-pharmaceutical company committed to the discovery and development of new drugs to treat diseases for which there is significant unmet medical need. Neuro Biomed pioneers an emerging area of biotechnology known as regenerative medicine with a family of neuroprotective agents and advanced controlled release drug formulations for better patient care.

<http://neurobiomed.com>



NanoTecNexus specializes in the field of nanotechnology and its impact on industry, academia and society. Our unique and eclectic model blends industry innovation, cutting-edge academic research and philanthropy to create meaningful impact on the business and education front. We help industry tackle today's technology evolution issues and prepare them for tomorrow's challenges.

<http://www.nanotecnexus.org>



Howrey LLC has had one of the leading Intellectual Property practices in the United States for almost half a century. Today, we also have one of the leading IP practices in the world. Our 300 IP professionals include more than 180 with a technical background, and 27 with a PhD. We offer this talent as a strategic partner, preferred provider and panel counsel to Fortune 500 and Global 250 firms.

<http://www.howrey.com/>



Cooley Godward Kronish's transactional Intellectual Property practice is dedicated to maximizing the value and security of our clients' intellectual property (IP). Our attorneys work closely with businesses across a range of industries, including biotechnology, high technology, new media, retail and service, Internet, marketing, publishing and architecture, tailoring solutions to meet their particular needs and stage of development.

<http://www.cooley.com>



Counsel On Call's unique business model provides experienced attorneys at low rates on schedules our clients control. With a leadership team comprised exclusively of former practicing attorneys, we collaborate with clients to dramatically reduce costs, control workload issues, and create flexible solutions for a broad range of needs. Our attorneys - who have years of quality experience - work individually, in teams, on site or remotely.

<http://www.counseloncall.com>



The TemPositions Group of Companies is a privately owned full-service staffing firm offering temporary, contract temp-to-hire and direct hire services. We're one of the largest regional staffing firms in the country, serving the New York, Connecticut, New Jersey and California markets.

We're comprised of multiple specialized divisions, each staffed with individuals possessing years of hands-on industry experience. By having similar backgrounds to both our clients and the professionals we place, our internal staff understands the nuances and can select precisely the right individuals for the job. <http://www.tempositions.com>



Sino-American Biotechnology and Pharmaceutical Professional Association (SABPA) is an 501(c)(3) nonprofit organization founded in early 2002 by professionals and scholars from the Chinese community in San Diego. In 2005, we expanded to Orange County and Los Angeles. We invite all scholars, professionals and entrepreneurs of any origin who are working in, engaged in, or interested in the biotech and pharmaceutical industry in Southern California to join us as a member of SABPA.

<http://www.sabpa.org>



As part of the International Institute of Nanotechnology, Green Zebra Jobs is a non-profit job placement firm specializing in placements for nano, bio, and cleantech industries. Green Zebra offers programs for the placement of temporary, fulltime, and we have an apprentice program for experienced workers seeking careers in a new industry. Our unique relationship with our training partners allows us access to certified candidates. Our non-profit status allows us to place candidates without high commissions getting in the way.

<http://www.greenzebrajobs.org>

IAnano



Sponsors & Supporting Organizations



The **Stanford NanoCharacterization Laboratory (SNL)**, provides modern facilities for the characterization of materials. It is a sister facility to the Stanford Nanofabrication Facility (SNF) in Stanford's National Nanotechnology Infrastructure Network (NNIN) Program. Our mission is to provide high quality, useful data and insight for as wide a range of users as possible. The equipment currently available includes several types of high resolution microscopes and X-ray diffractometers and others.

<http://www.stanford.edu/group/snl>

California Institute of Nanotechnology's mission is to provide workforce education and training in nanotechnology. In order to meet the needs of the emerging industry, the Institute provides:

- Basic and advanced training programs taught by world-class scientists and business leaders
- Networking opportunities with nanotechnology research centers and companies worldwide.
- Organized scientific conferences and job fairs to bring scientists, researchers, business executives, employers, and job seekers together.
- Training to equip dislocated workers with the essential skills for the nanotechnology industry.

<http://www.cinano.com>



Lawrence Berkeley National Laboratory (Berkeley Lab) has been a leader in science and engineering research for more than 70 years. Berkeley Lab conducts unclassified research across a wide range of scientific disciplines with key efforts in fundamental studies of the universe; quantitative biology; nanoscience; new energy systems and environmental solutions; and the use of integrated computing as a tool for discovery.

<http://www.lbl.gov>

California Environmental Protection Agency – Department of Toxic Substances Control

The Department of Toxic Substances Control (DTSC) regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California. Approximately 1,000 scientists, engineers, and specialized support staff make sure that companies and individuals handle, transport, store, treat, dispose of, and clean-up hazardous wastes appropriately. Through these measures, DTSC contributes to greater safety for all Californians, and less hazardous wastes reach the environment.

<http://www.dtsc.ca.gov>



Starpharma Holdings Limited is a world leader in the development of nanotechnology products for pharmaceutical, life-science and other applications.

Starpharma's lead product is VivaGel®, a gel-based formulation of a nano-pharmaceutical under development as a vaginal microbicide to prevent the transmission of sexually transmitted infections, including HIV and genital herpes. Starpharma has a 100% owned US-based subsidiary Dendritic Nanotechnologies Inc (DNT) expanding the company's potential products to include drug delivery and industrial specialty chemical applications, many of which have near-term cash-flow opportunities.

<http://www.starpharma.com>



ELORET was founded in 1979 with the objective to offer progressive research and engineering contract and consulting services to clients in government, industry, and academia. ELORET currently provides Science and Engineering support in the Space Technology Division (Code AS), the Aerospace Information Division (Code AI), and other offices at NASA/Ames Research Center at Moffett Field, California. We also provide research at NASA-Ames in Nanotechnology for the University of California under the UARC contract.

<http://www.eloret.com>



NanoViricides have assembled a world class team to lead us to success. Our team is also highly innovative, and boasts pioneering research in varied areas that are at the forefronts of medical science and pharmaceutical technology such as polymeric micelles, multi-specific multi-targeting, anti-sense DNA, siRNA, ribozymes, and gene therapy.

<http://www.nanoviricides.com>



Wiley's Scientific, Technical, Medical, and Scholarly (STMS) business, also known as Wiley-Blackwell, serves the world's research and scholarly communities, and is the largest publisher for professional and scholarly societies. Wiley-Blackwell's programs encompass journals, books, major reference works, databases, and laboratory manuals, offered in print and electronically. Through Wiley InterScience, we provide online access to a broad range of STMS content through licensing agreements.

<http://www.wiley.com>



DNA2.0 is the largest US provider of synthetic genes, with a global customer base comprised of academia, government and the pharmaceutical, chemical, agricultural and biotechnology industries. In contrast to most competitors, DNA2.0 manufactures all their synthetic genes in the USA. Using proprietary technologies, DNA2.0 exploits the synergy between a highly efficient gene synthesis process and new protein optimization technologies.

<http://www.dna20.com>



International Association of Nanotechnology

The International Association of Nanotechnology (IANT), is a non-profit organization with the goals to foster scientific research and business development in the areas of Nanoscience and Nanotechnology for the benefit of society.

The International Association of Nanotechnology and its affiliated organizations enable you to build a network of relationships across USA and around the world, relationships that will promote new ideas, new friendship and open new opportunities for you.

1290 Parkmoor Ave., San Jose, CA 95126, USA
phone: 408-280-6222 • into@ianano.org
<http://www.ianano.org>

This educational and outreach program is partially funded by a grant made under the "President's High Growth Job Training Initiative" of the US Department of Labor. We appreciate and acknowledge the support of the United States Government..