Nano Bio Clean Tech™
The 4th International Congress of Nanotechnology 2007
Clean Tech Congress 2007
November 5-8, 2007 • Hyatt Regency San Francisco Airport

“Forging the New Scientific Frontier in the Global Economy”
Letter from the Conference Chair

Dear Colleague,


This year’s program features a wide and rewarding range of forums, training modules, invited lectures, breakout scientific sessions and roundtable business discussions that highlight the latest development and applications in the fields of nanotechnology, nanomedicine and clean tech.

The nano bio and clean technologies are becoming increasingly important to the continued growth and welfare of the global economy. On an annualized basis, the federal government of the United States earmarks $1.4 billion to the development and enrichment of nanotechnology. Within the past year, the European Union has committed more than $2 billion to the development of nanotechnology-related projects; other countries have invested a significant R&D budget towards nanotechnology research.

Nanomedicine has opened a new dimension of research and product development, focusing on the novel physical, chemical and biological properties of materials at the nano-scale level for potential applications in prevention, diagnosis and treatment of diseases.

While nanotechnology continues to fill the gap between concept and reality, clean tech has also emerged as the watchword of the decade: More companies and organizations are focusing on the demand for technologies that protect the climate, provide power and offer more efficient means of storing energy. In many cases, nanotechnology is the engine that drives the advancement of clean tech.

The program has been designed to help you to gain insights into some of the latest scientific breakthroughs and exciting business opportunities as well as to present to you challenges facing the emerging industries which require international collaboration.

I would like to thank our volunteers, and many of our colleagues who have done so much to make this year’s conference successful.

I look forward to meeting each one of you in San Francisco. I hope you enjoy this beautiful city and find the program, papers, and workshops stimulating and valuable.

With warmest regards,

Lloyd L. Tran
President, International Association of Nanotechnology
Director, California Institute of Nanotechnology

The International Association of Nanotechnology is a non-profit organization with the goals to foster scientific research and business development in the areas of nanoscience and nanotechnology for the benefits of society. The Association fosters friendship, equality and cooperation amongst its members around the world.

Under the provisions of a $1.5 million high growth jobs training grant from the federal US government, the Association is able to offer several programs that address the need for workforce training in the nanotechnology and clean tech sectors.

To join the Association, please visit our web site: www.ianano.org

ICNT 2007 Conference Topics:
- Nanomaterials
- Nanodevices
- Nanoelectronics
- Nanobiotechnology
- Nanomedicine
- Nano Drug Delivery Systems
- Nanotechnology in Semiconductor Industry
- Nanotechnology in Biopharmaceutical Industry
- Nanotechnology in Energy Industry
- Nano Tools
- Molecular Engineering
- Nano Manufacturing
- Nanoparticles Toxicology
- Societal & Environmental Impacts
- Health Safety Implications
- Intellectual Property and Technology Transfer
- Capital Funding and Grants for Start-up Ventures
- Other related topics

CLEANTECH CONGRESS 2007 Conference Topics:
- Cleantech Business
- Biofuels
- Photovoltaic
- Hydrogen
- Fossil Fuels
- Electric Car
- Sustainable Energy Public Policy
- Direct Thermal Energy Conversion
- Electrochemical Conversion and Storage
- Nanostructured Solar Cell Manufacturing
- Intellectual Property
- Commercialization
- Venture capital investment
### Monday November 5, 2007 (Pre-conference Workshops)

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<tr>
<th>Time</th>
<th>Event</th>
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<tr>
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<td>Workshop Registration</td>
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<tr>
<td>10:00 AM - 5:00 PM</td>
<td>Conference Registration</td>
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<td>Exhibitor Registration</td>
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<td>9:00 AM - 12:00 PM</td>
<td><strong>Advanced Workshops</strong></td>
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<tr>
<td></td>
<td><strong>Workshop 1</strong>: Introduction to Nanotechnology</td>
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<td>Room Regency A</td>
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<tr>
<td>9:00 AM - 12:00 PM</td>
<td><strong>Workshop 2</strong>: Carbon Nanotubes: an introduction</td>
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<td>Room Regency B</td>
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<tr>
<td>2:45 PM - 5:45 PM</td>
<td><strong>Workshop 3</strong>: Nanobiotechnology &amp; Nanomedicine: Applications of Tissue Engineering</td>
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<tr>
<td>2:45 PM - 5:45 PM</td>
<td><strong>Workshop 4</strong>: Intellectual Property &amp; Technology</td>
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<td></td>
<td>Licensing &amp; Corporate Strategic Alliance</td>
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<td></td>
<td>Room Regency A</td>
</tr>
<tr>
<td>9:00 AM - 10:30 AM</td>
<td>Nanotech 120BE: Nano Bio Clean Tech Business: an Overview</td>
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<tr>
<td>10:45 AM - 12:15 PM</td>
<td>Nanotech 100BE: Introduction to Nanotechnology</td>
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<tr>
<td>1:00 PM - 2:30 PM</td>
<td>Nanotech 140BE: Environmental Health &amp; Safety Implications of Nanotechnology</td>
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<tr>
<td>2:45 PM - 5:45 PM</td>
<td><strong>“Business Re-engineering” Workshop</strong></td>
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<td>(Room: Regency A)</td>
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<tr>
<td>2:45 PM - 5:45 PM</td>
<td>Nanotech 240BE: Technology Licensing &amp; Corporate Strategic Alliance</td>
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<td>(2:45 PM - 5:45 PM)</td>
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<td>2:45 PM - 5:45 PM</td>
<td><strong>“Train the Trainer” Workshop</strong></td>
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<td>(Room: Regency B)</td>
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<tr>
<td>2:45 PM - 5:45 PM</td>
<td>Nanotech 425TT: Nanobiotechnology &amp; Nanomedicine: Applications of Tissue Engineering</td>
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### Tuesday November 6, 2007

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<tr>
<td>7:30 AM - 4:00 PM</td>
<td>Registration</td>
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<tr>
<td>7:30 AM - 8:30 AM</td>
<td>Breakfast</td>
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<tr>
<td>8:30 AM - 12:00 PM</td>
<td>General Sessions</td>
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<tr>
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<td>Welcoming Remarks from the Program Chair</td>
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<td>Keynote</td>
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<td>Invited Lectures</td>
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<tr>
<td>12:00 PM - 2:00 PM</td>
<td>Lunch / Poster Presentation</td>
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<tr>
<td>2:00 PM - 5:30 PM</td>
<td><strong>Breakout Sessions</strong></td>
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<tr>
<td></td>
<td><strong>Track A</strong>: Nanomedicine</td>
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<td><strong>Track B</strong>: Nanomaterials</td>
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<td><strong>Track C</strong>: Environmental Health &amp; Safety Nanoelectronics</td>
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<td></td>
<td><strong>Track D</strong>: Professional Development Certificate in Nanotechnology Business Re-Engineering</td>
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<td></td>
<td><strong>Track E</strong>: Professional Development Certificate in Nanotechnology “Train the Trainer”</td>
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<tr>
<td>2:00 PM - 5:30 PM</td>
<td><strong>Workshop 5</strong>: Financing an Emerging Technology Company</td>
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<td><strong>Workshop 6</strong>: Nanomaterial Characterization</td>
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<td><strong>Workshop 7</strong>: Micro and Nano-Fabrication</td>
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<td>7:30 AM - 8:30 AM</td>
<td>Breakfast</td>
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<tr>
<td>8:30 AM - 12:00 PM</td>
<td>General Sessions</td>
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<td>Keynotes</td>
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<td>Invited Lectures</td>
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<tr>
<td>12:00 PM - 2:000 PM</td>
<td>Lunch</td>
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<tr>
<td>2:00 PM - 5:30 PM</td>
<td><strong>Breakout Sessions</strong></td>
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<tr>
<td></td>
<td><strong>Track A</strong>: Nanomedicine</td>
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<td></td>
<td><strong>Track B</strong>: Nanomaterials</td>
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<td></td>
<td><strong>Track C</strong>: Clean Tech Leader Forum- Session I</td>
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<tr>
<td></td>
<td><strong>Track D</strong>: Professional Development Certificate in Nanotechnology Business Re-Engineering</td>
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<td></td>
<td><strong>Track E</strong>: Professional Development Certificate in Nanotechnology “Train the Trainer”</td>
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<tr>
<td>2:00 PM - 5:30 PM</td>
<td>Workshop 8: Surface &amp; Thin Filmsuate Nanotechnology</td>
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### Thursday November 8, 2007

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<td>7:30 AM - 4:00 PM</td>
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<td>General Sessions</td>
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<td>Keynotes</td>
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<td>Invited Lectures</td>
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<td>12:15 PM - 2:00 PM</td>
<td>Lunch</td>
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<td>2:00 PM - 5:30 PM</td>
<td><strong>Breakout Sessions</strong></td>
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<td><strong>Track A</strong>: Nanostructures &amp; Applications</td>
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<td><strong>Track B</strong>: Clean Tech Forum- Session II</td>
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<td><strong>Track C</strong>: Professional Development Training</td>
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<td><strong>Track D</strong>: Field Trip to Stanford University</td>
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<td>Nano Characterization Laboratory</td>
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<td>Workshop on How to Use AFM and SEM for Nanoscale Characterization</td>
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<tr>
<td>5:30 PM - 6:00 PM</td>
<td>Congress Conclusion</td>
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### SPONSORED BY

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

http://www.cinano.com
### Monday November 5, 2007

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<td>Workshop 2: Carbon Nanotubes: an introduction</td>
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<tr>
<td>12:15 PM - 1:30 PM</td>
<td>Lunch on your own</td>
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<tr>
<td>1:30 PM - 2:30 PM</td>
<td>Workshop 3: Nanobiotechnology &amp; Nanomedicine</td>
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<td>2:30 PM - 2:45 PM</td>
<td>Coffee Break</td>
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<td>Workshop 4: Intellectual Property &amp; Technology</td>
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<td>1:30 PM - 2:00 PM</td>
<td>Poster Presentation</td>
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<td>Poster Presentation</td>
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<tr>
<td>Time</td>
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| 3:45 PM - 5:45 PM | Cancer Nanomedicine-Special Session | T-A-4                  | Kattesh Katti                                                                                   | Gauss Professor, Professor of Radiology and Physics Director, University of Missouri Cancer Nanotechnology Platform Columbia, MO, USA  
“Nano-Nature Connection in Nanomedicine: Green Nanoparticles in Medicine and Technology” |
| 3:45 PM - 4:15 PM | Track B                           | T-B-4                  | Kijung Yong and YoungJo Tak                                                                    | Surface Chemistry Laboratory of Electronic Materials, Department of Chemical Engineering, Pohang University of Science and Technology (POSTECH), Pohang 790-784, Korea  
“Fabrication of ZnO nanorod and heterostructure array using low temperature method” |
| 4:15 PM - 5:15 PM | Track B                           | T-B-5                  | Bryan P. Ribaya, Darrel L. Niemann, Joseph Leung, Philip Brown, Norman Gunther                  | 1 Department of Electrical Engineering, Santa Clara University, Santa Clara, CA 95053  
2 Institut de Physique, Université de Neuchâtel, 2007 Neuchâtel, Switzerland  
“A Study on Individual Carbon Nanotube Field Emission Cathodes: Mechanical and Electrical Reliability and the Effects of Cathode Structure” |
| 5:15 PM - 5:45 PM | Track C                           | T-B-6                  | R. Bertschinger, Ph. A. Aebi T. A. Jung                                                        | 1 Laboratory for Micro- and Nanostructures, Paul Scherrer Institute, 5232 Villigen PSI, Switzerland  
2 Institut de Physique, Université de Neuchâtel, 2007 Neuchâtel, Switzerland  
“Influence of Dipolar Fields in Molecular Monolayer Phases: Sub-Phthalocyanine(111)” |
| 6:15 PM - 7:00 PM | Track B                           | T-B-8                  | M. Anis-ur-Rehman and Asghari Maqsood                                                         | 1 Applied Thermal Physics Laboratory, Department of Physics, COMSATS Institute of Information Technology, Islamabad, Pakistan  
2 Thermal Physics Laboratory, Department of Physics, Quaid-i-Azam University, Islamabad 45320, Pakistan  
“Influence of size and composition of Zn doped Cobalt Nano ferrites” |
| Tuesday PM   | Nanomaterials                     | (Grand Ballroom B)     | Dae Su Kim, Woo Jin Choi, Ji-Hyun Byun, Robert L. Powell                                      | 1 Department of Chemical Engineering, Chungbuk National University, 410 Sungbongro Cheongiu, Chungbuk 361-763, South Korea  
2 Department of Chemical Engineering and Materials Science, University of California at Davis, 1 Shields Avenue, Davis, CA 95616, USA  
3 Effects of Amine Functionalization on the Curing and Physical Properties of Epoxy-MWNT Nanocomposites |
| 3:00 PM - 3:30 PM | Track B                           | T-B-3                  | C.D. Reddy and C. Lu                                                                          | Institute of High Performance Computing, 1 Science Park Road, #01-01 The Capricorn, Science Park II, Singapore 117528,  
“Continuum parameters for vibration analysis of single-walled carbon nanotubes” |
| 3:30 PM - 4:15 PM | Track C                           | T-C-1                  | Environmental, Health & Safety                                                                 | Petia Simeonova, A. Erdely, V. G. Walker, T. Hulderman, and R. Salmen  
1 National Institute for Occupational Safety and Health, Morgantown, WV, USA  
2 “Carbon nanotubes – toxicity evaluation” |
| 4:15 PM - 5:15 PM | Track C                           | T-C-2                  | Patrick Lin                                                                                   | The Nanoethics Group, Santa Barbara, CA, USA  
“Superman vs. Frankenstein’s Monster: The Debate on Human Enhancement Technologies” |
3:00 PM - 3:30 PM  
Track D  
Tuesday PM  

Jean-Pascal Piret1, Sébastien Vankoningsloo1, Renaud Vigneron2, Stéphanie Rolin1, Christelle Saout2, Bernard Masereel2, Joseph Delhaute1, Stéphane Lucas1 and Olivier Toussaint2  
1 Laboratory of Biochemistry and Cellular Biology (URBC), University of Namur, 61 rue de Bruxelles, 5000 Namur, Belgium.  
2 Laboratory of Analysis by Nuclear Reactions (LARN), University of Namur, 61 rue de Bruxelles, 5000 Namur, Belgium.  
3 Pharmacy Department, University of Namur, 61 rue de Bruxelles, 5000 Namur, Belgium.  
4 Laboratory of Chemistry and Electrochemistry of Surfaces, University of Namur, 61 rue de Bruxelles, 5000 Namur, Belgium.  
“Nanotoxico: Risk assessment of nanoparticles on human health using in vitro and in vivo models”

3:30 PM - 3:45 PM  
Coffee break

3:45 PM - 4:15 PM  
Track C  

Masanori Horis1, Shigehisa Endoh2, Haruhisa Kato3, Shinichi Kinugasa2, Kayori Takahashi3, Katsuhide Fujita1, Yoshiro Saito1, Yasukazu Yoshida1, Hitoshi Iwashashi1, Etsuo Niki3, and Junko Nakaniishi4  
1 Human Stress Signal Research Center (HSSRC), National Institute of Advanced Industrial Science and Technology (AIST), 1-8-31 Midorigaoka, Ikeda, Osaka 563-8577, Japan  
2 Research Institute for Environmental Management Technology, AIST, 16-1 Onogawa, Tsukuba, Ibaraki 305-8569, Japan  
3 National Metrology Institute of Japan (NMIJ), AIST, 1-1-1 Higashi, Tsukuba, Ibaraki 305-8565, Japan  
4 Laboratory of Chemistry and Electrochemistry of Surfaces, University of Namur, 61 rue de Bruxelles, 5000 Namur, Belgium.  
“Biological effects induced by ultrafine TiO2 in cell culture system”

3:45 PM - 5:00 PM  
Track E  

Ganesh Rajagopalan and Lawrence Y.C. Leong  
Kennedy/Jenks Consultants, Irvine, CA - USA  
“Removal of Nanomaterials in Wastewater”

4:15 PM - 4:45 PM  
Track C  

Boumadhi Najib1,2, Grossoue Philippe1, Gullot Bernard1, Coutier Michèle1, Vergnon Jean-Michel1, Boudard Delphine1, Sebastien Michèle1  
1 Centre SPIN, department PC2M, CNRS UMR 5148, Ecole Nationale Superieure des Mines de Saint-Etienne  
2 CISM, Centre Ingénierie et Santé, Ecole Nationale Superieure des Mines de Saint-Etienne.  
3 Medicine faculty (EA 3063)/CHU of Saint-Etienne : Pneumology – cytology et histology.  
4 H.S.E manager of Saint-Gobain CREE, Cavaillon.  
“Study the biological activity of fines industrials SiC powders”

Tuesday PM  
Track D  

Professional Development Training  
Business Re-Engineering  
Nanotech 320  
Workshop SA: Financing a Start-up Enterprise in Emerging Technology  
(Room: Regency A)  
Andrew D. Wahl  
Managing Director  
IG Partners  
Redwood Shores, CA 94065  

Wednesday November 7, 2007

7:30 AM - 12:00 PM  
Registration

7:30 AM - 8:30 AM  
Breakfast

Wednesday AM  
(Grand Ballroom ABC)  
8:30 AM - 8:45 AM  
W-G-1  
9:00 AM - 9:15 AM  
W-G-3

8:45 AM - 9:00 AM  
W-G-2  
9:15 AM - 10:00 AM  
W-G-4

10:00 AM - 10:15 AM  
Coffee break

10:15 AM - 10:40 AM  
W-G-5

10:40 AM - 11:05 AM  
W-G-6

11:05 AM - 11:30 AM  
Coffee Break

Nanotech 340  
Workshop SB: Initial Public Offering Options for a High Growth Enterprise  
(Room: Regency A)  
Andrew D. Wahl  
Poster Presentation

“Train the Trainer” Workshops

Nanotech 225TT - Workshop: 6  
Nanomaterials Characterization  
(Room: Regency B)  
Geetha Dholakia, Senior Research Scientist  
NASA Ames Research  
Moffett Field, CA USA

Nanotech 320TT - Workshop: 7  
Micro and Nano-Fabrication: Principle and Applications  
(Room: Regency B)  
Mahmudur Rahman, Professor  
Electrical Engineering Department  
Director, Electron Devices Laboratory  
Santa Clara University, Santa Clara, CA - USA

7:30 AM - 12:00 PM  
Registration

7:30 AM - 8:30 AM  
Breakfast

Wednesday AM  
(Grand Ballroom ABC)  
8:30 AM - 8:45 AM  
W-G-1  
9:00 AM - 9:15 AM  
W-G-3

8:45 AM - 9:00 AM  
W-G-2  
9:15 AM - 10:00 AM  
W-G-4

10:00 AM - 10:15 AM  
Coffee break

Phani AyalaSomayajula  
CEO, Center for Advanced Nano-Technologies  
Abruzzo, ITALY  
“Synthesis of SnO2 nanofibers by electrospinning technique and their applications in gas sensors”

Ning Xi  
Michigan State University  
East Lansing, MI 48824 USA  
“Manufacturing and Testing of Carbon Nanotube (CNT) Based IR Detectors”

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<th>Time</th>
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<th>Speaker/Institution/Program</th>
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<td>2:00 PM - 2:30 PM</td>
<td>Track A</td>
<td>Subir Sarkar, Jadavpur University</td>
<td>&quot;Genetic approach for efficient high speed nanodevices&quot;</td>
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<td>2:45 PM - 3:00 PM</td>
<td>Track B</td>
<td>Frederick Oladeinde, University of Queensland</td>
<td>Multicomponent Suspensions via Flow Cytometry</td>
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<td>3:15 PM - 3:30 PM</td>
<td>Track A</td>
<td>Dewayne Stennett, University of Queensland</td>
<td>Nanomedicine: &quot;New Methods of Drug Delivery&quot;</td>
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<tr>
<td>3:45 PM - 4:00 PM</td>
<td>Track B</td>
<td>Yu Sakurai, Tohoku University</td>
<td>&quot;Nanosized Silver Iodide Beads As X-Ray Contrast Media and Its In Vivo Distribution&quot;</td>
</tr>
<tr>
<td>4:15 PM - 4:30 PM</td>
<td>Track A</td>
<td>Darby Kozak, University of Queensland</td>
<td>&quot;Profiling Protein Surface Interactions of Multicomponent Suspensions via Flow Cytometry&quot;</td>
</tr>
<tr>
<td>4:45 PM - 5:00 PM</td>
<td>Track B</td>
<td>Kathleen Sirois, University of Newcastle Callaghan</td>
<td>&quot;Glucose Biosensors Based on Hygroscopic Insulator Field-Effect Transistors&quot;</td>
</tr>
<tr>
<td>5:15 PM - 5:30 PM</td>
<td>Track A</td>
<td>Geetha R Dholakia, Center for Advanced Aerospace Materials</td>
<td>Nanomaterials: &quot;Self assembly: From organic molecules to inorganic nanowires&quot;</td>
</tr>
<tr>
<td>5:45 PM - 6:00 PM</td>
<td>Track B</td>
<td>Khiystova, Anna, Maximov, Alexander, Institute of Chemistry</td>
<td>&quot;Application of Underwater Volume Discharges in Electrolyte Solution for Cleaning from Organic Compounds&quot;</td>
</tr>
<tr>
<td>6:15 PM - 6:30 PM</td>
<td>Track A</td>
<td>Darrell L. Niemann, Texas A&amp;M University</td>
<td>&quot;Growth and reactivity to oxygen of ultra-thin Ni films on Rh(111).&quot;</td>
</tr>
<tr>
<td>6:45 PM - 7:00 PM</td>
<td>Track B</td>
<td>Geetha R Dholakia, Center for Advanced Aerospace Materials</td>
<td>&quot;Self assembly: From organic molecules to inorganic nanowires&quot;</td>
</tr>
</tbody>
</table>

The Conference Schedule may be subject to changes.
Thursday November 8, 2007

**General Session**
Opening Remarks from Program Chair
Assembly Member Loni Hancock
Assembly member of the State of California

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**Clean Tech Discussion Forum**
Invited Speakers/Panelists
- Dan Cort, Mayor - Pacific Grove, CA
- Dan Furtado, Mayor - Campbell, CA
- Brian Meano, CEO - Fieldstone Energy Company, Cleveland, OH
- Robert Preus, President - Abundant Renewable Energy, Newberg, OR
- Mark Goldes, CEO - Magnetic Power, Inc., Sebastopol, CA
- Scott Elrod - Manager Hardware System Laboratory, Palo Alto Research Center, Palo Alto, CA - USA
- Rich Hilt, Consultant - Brightline, Menlo Park, CA
- Marianna Grossman, Consultant - Minerva Consulting, Palo Alto, CA

**Professional Development Training**
Business Re-Engineering Certificate
- **Nanotech 440BE: Nanotech Re-Engineering Project Development - Part 1**
  Preparation of Project Proposal
  Lead by faculty members of the California Institute of Nanotechnology
- **Nanotech 440BE: Nanotech Re-Engineering - Project Presentation - Part 2**
  Preparation of Project Proposal
  Lead by faculty members of the California Institute of Nanotechnology

**“Train the Trainer” Workshops**
- **Nanotech 235TT: Surfaces & Thin Films: Applications in Nanotechnology**
  Zhen Guo, Senior Process Engineer - INTEL Corporation, Santa Clara, CA USA
- **Nanotech 315 TT: Fundamentals & Applications of Carbon Nanotubes**
  Cat-Tien Nguyen - Senior Scientist, Center for Nanotechnology, NASA Ames Research Center, Moffett Field, CA 94035 USA

---

**Alex Zettl**
Professor - Department of Physics
University of California at Berkeley & Lawrence Berkeley National Laboratory
Berkeley, CA USA
“Nanodevice “Firsts” for Electronics and Energy Applications”

**K.V.Ravi**
Director, Solar Business Group - Applied Materials
Santa Clara, CA USA
“Photovoltaics - enabling scale manufacturing and cost reduction”

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**Coffee Break**

**Panel Discussion on Clean Tech Investment**
- Ira Ehrenpreis - General Partner - Technology Partners
- Bill Reichert - Managing Director - Garage Technology Partners
- Michael Sears - Managing Partner - Atrium Capital
- Abe Yokell - Senior Associate - Rockport Capital Partners
- Scott Chou - Partner - Gabriel Venture Partners
- Mark Chasan - CEO - Transformative Capital, Inc
- David Ward - Senior Partner - MTI Partners Inc

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**Lunch**

**Nanostuctures & Applications**
- Maureen Gorsen - Director - The Department of Toxic Substances Control, Sacramento, CA USA
- Joel Ackerman - Of Counsel - Townsend & Townsend, San Francisco, CA USA
- Neville Freeman - Farfield Scientific Inc, Pittsburgh, PA, USA
  “The physical measurement of a wide range of nanosystems in real time”

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**Afternoon Coffee Break**

**Zhihao Yang**
President and CTO - NanoMas Technologies, Inc.
Vestal, NY
“Nanoparticle inks for printed electronics”

**Yuri Glukhoy & Lloyd Tran**
California Institute of Nanotechnology
San Jose, CA 96126 USA
“A novel manufacturing method to produce ultra pure gold and silver nanoparticles for medical applications”
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4:45 PM - 5:15 PM</td>
<td>Christine Arlt&lt;br&gt;German Aerospace Centre (DLR)&lt;br&gt;Braunschweig, Germany&lt;br&gt;“Ceramic Nanoparticles: The Key to Future Aerospace Materials”</td>
</tr>
<tr>
<td>5:15 PM - 5:45 PM</td>
<td>Rodica Morarescu, Frank Hubenthal, Lars Englert, Lars Haag, Thomas Baumer, and Frank Träger, Institut für Physik and Center for Interdisciplinary Nanosctructure Science and Technology – CINaT, Universität Kassel, Heinrich-Plett-Straße 40, D-34132, Kassel, Germany&lt;br&gt;“Nanoplications of Regular Arrays of Gold Nanoparticles Prepared by Nanosphere Lithography”</td>
</tr>
<tr>
<td>2:30 PM - 3:00 PM</td>
<td>A. Paul Alivisatos&lt;br&gt;Department of Chemistry, University of California, Berkeley, Berkeley, CA 94720-1460, USA&lt;br&gt;“Nanocrystal Based Solar Cells”</td>
</tr>
<tr>
<td>3:00 PM - 3:30 PM</td>
<td>Hector Cotal&lt;br&gt;Senior Scientist, Spectroliab&lt;br&gt;Sylmar, CA, USA&lt;br&gt;“Progress toward Low-Cost. Power Generation from High Efficiency Multijunction Concentrator Solar Cells”</td>
</tr>
<tr>
<td>3:00 PM - 3:30 PM</td>
<td>Claes G Granqvist&lt;br&gt;Department of Engineering Sciences, The Angstrom Laboratory, Uppsala University, Uppsala, Sweden&lt;br&gt;“Electrochromic foil technology for buildings: Combining energy efficiency and indoor comfort”</td>
</tr>
<tr>
<td>3:30 PM - 3:45 PM</td>
<td>Coffee Breaks</td>
</tr>
<tr>
<td>3:45 PM - 4:15 PM</td>
<td>Clark Gellings&lt;br&gt;Vice President, Electric Power Research Institute, Palo Alto, CA 94304 USA&lt;br&gt;“Nanotechnologies in electric utility applications”</td>
</tr>
<tr>
<td>4:15 PM - 4:45 PM</td>
<td>Rajeeva Lahri and Keshav Prasad&lt;br&gt;Sylnet Solar, Menlo Park, CA 94025 USA&lt;br&gt;“Mass Adoption of Solar Photovoltaics: Lessons from the Semiconductor Industry”</td>
</tr>
<tr>
<td>4:45 PM - 5:15 PM</td>
<td>Roland Schoettle&lt;br&gt;CEO, Optimal Technologies International Inc.&lt;br&gt;Bencia CA, USA&lt;br&gt;“What does the Electric Power System of the Future Need to Be?”</td>
</tr>
<tr>
<td>5:15 PM - 5:45 PM</td>
<td>Moneer Azzam&lt;br&gt;President/CEO - SolarOne Solutions&lt;br&gt;Framingham, MA USA&lt;br&gt;“How Advancements in LED Lighting Technology is Creating New Opportunity for Solar Powered Lighting”</td>
</tr>
</tbody>
</table>

The Conference Schedule may be subject to changes
A.M. M. Abeykoon¹, M. Castro-Colín², E. V. Anokhina¹,
M. N. Iliev¹, W. Donner¹, A. J. Jacobson¹, and S. C. Moss¹
¹ University of Houston, Houston, TX 77204,
² University of Texas, El Paso, TX 79968.
“Synchrotron X-ray and Optical Studies of the Structures of HgSe and Se
Semiconductor Nanoclusters Confined in Zeolite-L and Zeolite-Y”

M. Anis-ur-Rehman¹ and Asghari Maqsood²
¹ Applied Thermal Physics Laboratory, Department of Physics,
COMSATS Institute of Information Technology, Islamabad, Pakistan.
² Thermal Physics Laboratory, Department of Physics, Quaid-i-Azam
University, Islamabad 45320, Pakistan
“Synthesis and characterization of Zn dopped Cobalt Nano ferrites”

G. Ali Mansoori¹, Thomas F. George², Guoping Zhang³
and Lahren Assoudi⁴
¹ Departments of Bio & Chemical Engineering, University of Illinois at
Chicago. Chicago, IL 60612, USA
² Office of the Chancellor and Center for Molecular Electronics
Departments of Chemistry & Biochemistry and
Physics & Astronomy
University of Missouri–St Louis, St Louis, MO 63121, USA
³ Department of Physics, Indiana State University,
Terre Haute, IN 47809, USA
⁴ Argonne National Laboratory, Argonne, IL 60439, USA
“Structure and Opto-Electronic Behavior of Diamondoids,
with Applications as MEMS and at the Nanoscale Level”

J. Bhattacharya and AK Dasgupta
University of Calcutta, West Bengal, India
“Gold Nanoparticle Induced Transformation of Non-Competent
Escherichia Coli”

M. Chávez, A. Hernández, L. Maya, I. Gómez, R. Lucio
Universidad Autónoma de Nuevo León,
Facultad de Ciencias Químicas,
Monterrey, Nuevo León, México
“Evaluation of photocatalytic activity ZnO obtained
by sol-gel in the hexavalent chromium removal”

Dosev, Dosi, Nichkova, Mikaela; Ma, Zhi-Ya, Gee, Shirley J.;
Kennedy, Ian M., , Hammock, Bruce D. ; Chang, Dan
University of California Davis, One Shields Avenue,
Davis, CA 95616
“Magnetic luminescent nanoparticles for internal calibration
in multiplexed immunoassays”

Rubén E. Estrada-Salas, Ariel A. Valladares-Clemente
Materials Research Institute,
National Autonomous University of Mexico
Mexico City, Mexico
“DFT Studies on Electronic Properties of Endohedral Metallofullerenes”

Yasir Faheem¹ and Khurram Saleem²
¹ Corrosion & Protection Centre, School of Materials, University of
Manchester, The Mill, Manchester, M60 1QD, United Kingdom
² Chemistry Department, University of Engineering and Technology,
Lahore-54890, Pakistan
“Free Standing Nanoparticles Formation and Phase Transformation in
Lead Zirconate Titanate Derived by Sol-Gel”

Curtis O. Green¹, Dennis H. Bailey²,
Lowell L. Dilworth¹, Andrew O. Wheatley¹,²
David Hui³ and Helen N. Asemota³,⁴,⁵
¹ Department of Basic Medical Sciences (Biochemistry),
² Biotechnology Centre, University of the West Indies,
Mona, Jamaica,
³ Dept. of Mech. Engineering, Univ. of New Orleans, USA.
⁴ Dept. of Nat. Sciences, Shaw Univ., Raleigh, NC., USA.
“Polymethoxylated Flavonoids from Jamaican and Mexican Citrus Peels:
Characterization and Nanoparticulatizaion for Potential
Biomedical Application”

Ashish K. Keshari¹, ², Prashant K. Singh¹, ³,
and Avinash C. Pandey¹, ²
¹ Nanophosphor Application Centre, University of Allahabad, Allahabad-
211 002, India.
(A DST Funded Project under IRHPA in collaboration
with Nanocrystal Technology, New York),
² Department of Physics, University of Allahabad,
Allahabad-211 002, India.
³ Centre for Biotechnology, University of Allahabad,
Allahabad-211 002, India.
“Temporal evolution study of biotin capped
ZnS:Mn2+ nanocrystals”

A. Kisner¹,², A. R. Vaz³, M. R. Aguilar³, F. A. Cavarsan³,
J. A. Diniz², L. T. Kubota¹,²
¹ Institute of Chemistry, UNICAMP, PO Box 6154,
Campinas-SP, Brazil
² Center of Semiconductors Components (CCS),
UNICAMP, PO Box 6061, Campinas-SP, Brazil.
“Assisted Integration of Au Nanorods as Nanoelectrodes
of MOS Capacitors by Focused Ion Beam”

Hirohiko Kitsuki¹, Kristofer Gleason¹, Patrick Wilhite¹,
Makoto Suzuki¹, Quoc Ngo¹,², Alan M. Cassell², Jun Li²,
and Cary Y. Yang¹
¹ Center for Nanostructures, Santa Clara University,
Santa Clara CA, 95053
² NASA Ames Research Center, Center for Nanotechnology,
Moffett Field, CA, 94035
“Scanning Transmission Electron Microscopy of Carbon
Nanofibers under High-Current Stress”

Stephanie I-Im Lim, and Chuan-Jian Zhong
Department of Chemistry, State University of New York,
Binghamton, New York 13902, USA
“Gold Nanoparticles to Probe Biointerfacial Reactivity of
Homocysteine”

Shun-ichi Matsuura¹, Tetsuji Itoh¹, Ryo Ishii⁴,
Kengo Sakaguchi², Tatsuo Tsuno³, Cary Y. Yang¹,
Takaaki Hanaoka¹, Fujio Mizukami¹
¹ Research Center for Compact Chemical Process
National Institute of Advanced Industrial Science and Technology
(AIST), Nigatake 4-2-1, Miyagino-ku, Sendai 983-8551, Japan
² Scanning Transmission Electron Microscopy of Carbon
Nanofibers under High-Current Stress
³ Nanophosphor Application Centre, University of Allahabad, Allahabad-
211 002, India.
⁴ NASA Ames Research Center, Center for Nanotechnology,
Moffett Field, CA, 94035
“Artificial Assembly of Hetero-Proteins Encapsulated in
Mesoporous Material”

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R. S. Moria, A. M. Patel, Dr. D. J. Sen, Dr. C. N. Patel  
Department of Pharmaceutical Analysis and Quality Assurance  
Shri Sarvajanik Pharmacy College, Mehsana-384001, Gujarat, INDIA.  
“The Impact of Nanotechnology on Controlled Drug Delivery”  

A.R. Phani1 *, D. Di Claudio2 and S. Santucci1  
1 CASTI, CNR-INFM Regional Laboratory, Department of Physics, University of L’Aquila  
Via Vetoio 10 Coppito 67010 L’Aquila ITALY  
2 Microntechnology, Avezzano, Italy  
“Enhanced antibacterial and photocatalytical properties of Fe+3 doped TiO2, Carbon nanotube doped TiO2 thin films synthesized by sol-gel technique”  

Pankaj Prajapati, C. N. Patel  
Shri Sarvajanik Pharmacy College, Mehsana, Gujarat, India – 384001.  
“Studies in Design and Development of Colon Specific Drug Delivery Using Polymers”  

Thathan Premkumar1, Jong-Beom Kim1, Olivia Giani2, Jean-Jaques Robin2, Francois Schue2, and Kurt E. Geckeler1  
1 Laboratory of Applied Macromolecular Chemistry, Department of Materials Science and Engineering, Gwangju Institute of Science and Technology (GIST), Gwangju, South Korea;  
2 Laboratory of Macromolecular Chemistry, UMR 5073, CNRS, University Montpellier II, Montpellier, France.  
“Carbon Nanotube/Poly(L-lysine) Composites”  

Ravikumar Vasantlal Modi and Dr. Dhrubo Jyoti Sen  
Department of Pharmaceutical Chemistry,  
Shri Sarvajanik Pharmacy College,  
Hemchandracharya North Gujarat University, Arvind Baug, Mehsana-384001. Gujarat, India,  
Phone: 02762-247711; Fax: 02762-247712  
“Structure activity relationship studies of synthesized urea Diamides on CNS depression and sleeping time potentiation effect”  

Kijung Yong and Seongho Jeon  
Surface Chemistry Laboratory of Electronic Materials, Department of Chemical Engineering, Pohang University of Science and Technology (POSTECH), Pohang 790-784, Korea  
“Growth and characterization of tungsten oxide nanorods using thermal annealing of thin films”
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http://www.stanford.edu/group/snl/

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• 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 qualified dislocated workers with the essential skills for the nanotechnology industry.
http://www.cinano.com

The Clean Tech California Initiative is aimed at fostering the innovation and development of clean technologies, addressing workforce needs for high growth, high demand job training in California, and creating a consortium of public and private organizations to promote the affordability of clean technologies.
http://www.cleantechcalifornia.com

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