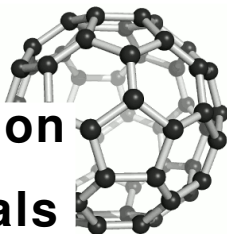


4th Mexican Workshop on Nanostructured Materials



March 19-22, 2013

Edificio Carolino-BUAP, Puebla, Mexico

Scientific Program



Time Schedule 4th Mexican Workshop on Nanostructured Materials:

| Time | Tuesday, March 19th | Wednesday, March 20th | Thursday, March 21st | Friday, March 22nd | Time |
|---------------|-------------------------------------|-----------------------|-------------------------|-------------------------|---------------|
| 8:30 - 9:00 | | Opening Ceremony | | | 8:30 - 9:00 |
| 9:00 - 9:30 | | Dr. Victor M. Altuzar | Dr. Gerko Oskam | Dr. Felipe Pérez | 9:00 - 9:30 |
| 9:30 - 10:00 | Course 1 Dra. Claudia Mendoza | Oral session - 01 | Oral session - 04 | Oral session - 07 | 9:30 - 10:00 |
| 10:00 - 10:30 | Coffee Break | Coffee Break | Coffee Break | Coffee Break | 10:00 - 10:30 |
| 10:30 - 11:00 | Registration | Dr. Ovidio Peña | Prof. Marcelino Barboza | Dr. Rafael Ramirez Bon | 10:30 - 11:00 |
| 11:00 - 11:30 | Course 1 Dra. Claudia Mendoza | Oral session - 02 | Oral session - 05 | Oral session - 08 | 11:00 - 11:30 |
| 11:30 - 12:00 | LUNCH | Prof. David C. Look | Dr. Mirnal Pal | Dr. David Diaz | 11:30 - 12:00 |
| 12:00 - 12:30 | | | | | 12:00 - 12:30 |
| 12:30 - 13:00 | | | | | 12:30 - 13:00 |
| 13:00 - 13:30 | | | | | 13:00 - 13:30 |
| 13:30 - 14:00 | | | | | 13:30 - 14:00 |
| 14:00 - 14:30 | | | | | 14:00 - 14:30 |
| 14:30 - 15:00 | | | | | 14:30 - 15:00 |
| 15:00 - 15:30 | | | | | 15:00 - 15:30 |
| 15:30 - 16:00 | Course 2 Dr. Miguel Avalos Borja | Oral session - 03 | LUNCH | LUNCH | 15:30 - 16:00 |
| 16:00 - 16:30 | Coffee Break | Poster Session I - P1 | Oral session - 06 | | 16:00 - 16:30 |
| 16:30 - 17:00 | Course 2 Dr. Miguel Avalos Borja | Welcome Toast | Coffee Break | Poster Session II - PII | 16:30 - 17:00 |
| 17:00 - 17:30 | | | Dr. Emilio Muñoz | Prof. Sergio Fuentes | 17:00 - 17:30 |
| 17:30 - 18:00 | | | Prof. Mauricio Terrones | Closing Ceremony | 17:30 - 18:00 |
| 18:00 - 18:30 | | | Dinner | | 18:00 - 18:30 |
| 18:30 - 19:00 | | | | | 18:30 - 19:00 |
| 19:00 - 19:30 | | | | | 19:00 - 19:30 |
| 19:30 - 20:00 | | | | | 19:30 - 20:00 |
| 20:00 | | | | | 20:00 |

Course

Keynote lecture

Invited talk

Contributed talk

Tuesday, March 19th
–Salón de Actos (Paraninfo)–

ORGANIZING COMMITTEE

Dr. Umapada Pal, IFUAP, MEX (Chairman)
Dr. Velumani Subramaniam, CINVESTAV, MEX (Co-chairman)
Dr. Alejandro Escobedo Morales, FIQ-BUAP, MEX (Co-chairman)
Dr. Pedro Hugo Hernández Tejada, VIEP-BUAP, MEX
Dr. Juan Francisco Rivas Silva, IFUAP, MEX
Dr. Antonio Rivera, Universidad Politécnica de Madrid, ESP
Dr. Fidel Pacheco, UPAEP, MEX
Prof. Jin Z. Zhang, UC-Santa Cruz, USA
Prof. Aswini Kumar Pradhan, Norfolk University, USA
Dr. K. Burak Üçer, Wake Forest University, USA
Dr. Patricia Santiago Jacinto, IFUNAM, MEX
Prof. Yang Soo Kang, Sogang University, Republic of Korea
Dra. Ana Lilia González Ronquillo, IFUAP, MEX
Dr. Alejandro Reyes Coronado, IFUAP, MEX
Dra. Mou Pal, CIE-UNAM, MEX
Dr. Luis Zamora Peredo, MICRONA-UV, MEX
Dr. Leandro García González, MICRONA-UV, MEX

SPONSORS

Vicerrectoría de Investigación y Estudios de Posgrado-BUAP
Instituto de Física "Ing. Luis Rivera Terrazas"
Universidad Popular Autónoma del Estado de Puebla
Centro de Investigación en Micro y Nanotecnología, UV
Consejo Nacional de Ciencia y Tecnología
Instituto de Física, Universidad Nacional Autónoma de México
JEOL Ltd., Mexico
COTA Servicios y Productos Tecnológicos S.A. de C.V.
Spectramex, S.A. de C.V.

Registration: 8:30-13:30 hrs.

9:00–11:00 hrs. Course 1: Understanding Nanomedicine: Introduction and Perspectives.- Claudia Mendoza Barrera; MICRONA-UV, MEX

11:00-11:30 hrs. *Coffee Break*

11:30-13:30 hrs. Course 1: Understanding Nanomedicine: Introduction and Perspectives (*continuation*).- Claudia Mendoza Barrera; MICRONA-UV, MEX

13:30-15:30 hrs. *Lunch*

–Salón Verde–

15:30-17:30 hrs. Course 2: Caracterización de Materiales por Métodos de Microscopía Electrónica y Técnicas Afines.- Miguel Avalos Borja; IPICYT, MEX

17:30-18:00 hrs. *Coffee Break*

18:00-20:00 hrs. Course 2: Caracterización de Materiales por Métodos de Microscopía Electrónica y Técnicas Afines (*continuation*).- Miguel Avalos Borja; IPICYT, MEX

Wednesday, March 20th

–Sala de Proyecciones–

Registration: 8:30-14:00 hrs.

9:00-9:30 hrs. *Opening Ceremony*

9:30-10:00 hrs. Invited Talk: “Plasmonic Biosensors”.- Victor Manuel Altuzar Aguilar; MICRONA-UV, MEX

10:00-10:20 hrs. (O1-1) “Synthesis and Characterization of Polyhedral Stacked Microcolumns and Microparticles of Zinc by Thermal Evaporation and Condensation Technique”.- Bertha Luisa Rivera Flores; CIDS-ICUAP, MEX

10:20-10:40 hrs. (O1-2) “Epitope Peptide from HA H1N1 Conjugated to Gold Nanoparticles”.- Jonathan Pablo Carrillo Vázquez; ENMH-IPN, MEX

10:40-11:00 hrs. (O1-3) “Enhanced Transmission Through Subwavelength Slits”.- Juan Sumaya Martínez; UAEM, MEX

11:00-11:30 hrs. *Coffee Break*

11:30-12:00 hrs. Invited Talk: “All-plasmonic Fano Resonances in Metallic Nanostructures”.- Ovidio Peña; Universidad Politécnica de Madrid, ESP

12:00-12:20 hrs. (O2-1) “The influence of Mo Doping on the Physical Properties of Nanostructured WO₃ Films Deposited by Pulsed Spray Pyrolysis”.- Dwight R. Acosta; IFUNAM, MEX

12:20-12:40 hrs. (O2-2) “Effect of Symmetry-breaking on the Optical Properties of Metallic Nanoshells”.- V. Rodríguez Iglesias; UNICAR, MEX

12:40-13:00 hrs. (O2-3) “Controlling the Movement of Plasmonic Nanoparticles with Swift Electrons: Electron Tweezers?”.- Alejandro Reyes Coronado; IFUAP, MEX

13:00 - 14:00. Keynote Lecture: “Infrared Plasmonics via ZnO”.- David C. Look; Wright State University, USA

14:00-16:30 hrs. *Lunch*

16:30-16:50 hrs. (O3-1) “Síntesis de Nano-hidroxiapatita Mediante Precipitación Asistida por Sonicación”.- Ana Beatriz Martínez Valencia; UMSNH, MEX

16:50-17:10 hrs. (O3-2) “Development of a Sensor to Detect Magnetic Field Using the Magnetoimpedance Effect”.- Arturo Mendoza Castrejón; CCADET-UNAM, MEX

17:10-17:30 hrs. (O3-3) “Characterization of Nano-Hybrid Compounds of Apatite-bisphosphonate Obtained by Mechanical Alloying”.- Nancy Vargas Becerril; ESQIE-IPN, MEX

17:30-19:30 hrs. Poster Session I – PI codes (–*Primer patio*–)

19:30-20:00 hrs. *Welcome Toast (-Lobby-)*

Thursday, March 21st

–Sala de Proyecciones–

Registration: 8:30-14:00 hrs.

9:30-10:00 hrs. Invited Talk: “Solar Energy Conversion Systems Based on Nanomaterials: Dye-sensitized Solar Cells & Direct Water Splitting”.- Gerko Oskam; CINVESTAV-IPN, MEX

10:00-10:20 hrs. (O4-1) “Síntesis y Caracterización de Nanopartículas de TiO₂ sobre WO₃-SiO₂ Mesoestructurado”.- Luis Enrique Cortes; FCQ-BUAP, MEX

10:20-10:40 hrs. (O4-2) “Vacuum-free Thin Film Deposition of Kesterite Absorber Layer by Using Paste of Binary Sulfides”.- Mou Pal; IER-UNAM, MEX

10:40-11:00 hrs. (O4-3) “Control de Espesores y Propiedades de Películas Nanométricas de ZnS Obtenidas por RF Magnetron Sputtering”.- José Alberto Andraca Adame; CNMN-IPN, MEX

11:00-11:30 hrs. Coffee Break

11:30-12:00 hrs. Invited Talk: “AG, TL and OSL Dosimetry Assessment of Doped and Undoped CVD Nanodiamond”.- Marcelino Barboza Flores; UNISON, MEX

12:00-12:20 hrs. (O5-1) “Interference Effects on Photoluminescence of AlGaIn/GaN Quantum Wells”.- Manolo Ramírez López; CINVESTAV-IPN, MEX

12:20-12:40 hrs. (O5-2) “Influence of Mg Concentration on Structural, Optical and Electrical Properties of Epitaxial-grown C₆₀ Thin Films”.- Crisóforo Morales Ruíz; CIDS-ICUAP, MEX

12:40-13:00 hrs. (O5-3) “Nanostructured Silicon for Omnidirectional Antireflection Coating”.- J. S. Pérez Huerta; ICF-UNAM, MEX

13:00-13:20 hrs. (O5-4) “Photonic Zener Tunneling in one Dimensional Dual-periodical Multilayer Structures Based on Porous Silicon”.- José Octavio Estevez Espinoza; IFUAP, MEX

13:30-14:00 hrs. Invited Talk: “Multifunctionality at Nanoscale”.- Mrinal Pal; CSIR-Central Mechanical Engineering Research Institute, IND

14:00-16:30 hrs. Lunch

16:30-16:50 hrs. (O6-1) “Spinels and Perovskites of Iron Oxides Nanoparticles Obtained by Mechano-synthesis”.- America R. Vázquez Olmos; CCADET-UNAM, MEX

16:50-17:10 hrs. (O6-2) “Estudio de Forma de Nanoclústeres Metálicos por Métodos Topológicos y Geométricos”.- Estela de Lourdes Juárez Ruiz; FCE-BUAP, MEX

17:10-17:30 hrs. (O6-3) “Carbon Nanostructures Produced via Chlorination Reaction of Ni(C₅H₅)₂”.- Pedro G. González; MICRONA-UV, MEX

17:30-18:00 hrs. Coffee Break

18:00-18:30 hrs. Invited Talk: “Carbon Nanotubes: Advances and Perspectives”.- Emilio Muñoz Sandoval; IPICYT, MEX

18:30 - 17:30. Keynote Lecture: “Graphene and Beyond: From N-Doped Graphene to WS₂ Monolayers”.- Mauricio Terrones; The Pennsylvania State University, USA

20:00 hrs. Dinner (-Centro Mexicano Libanes de Puebla- Av. Hermanos Serdán #222. Col. Real del Monte Puebla, Puebla. Tel: 248 41 22)

Friday, March 22nd

–Salón de Actos (Paraninfo)–

Registration: 8:30-14:00 hrs.

9:30-10:00 hrs. Invited Talk: “Nanostructured Metamaterials”.- Felipe Pérez Rodríguez; IFUAP, MEX

10:00-10:20 hrs. (O7-1) “Birefringent Nanostructured Composite Materials”.- Bernardo S. Mendoza Santoyo, CIO, MEX

10:20-10:40 hrs. (O7-2) “Ditiocarbamatos de Cadena Larga como Ligantes de Nanopartículas de Cobre”.- Iván García Orozco; UAEM-UNAM, MEX

10:40-11:00 hrs. (O7-3) “Obtaining of PZT Ferroelectric Ceramics Nanoparticles by Sol-gel Route”.- Ma. Guadalupe Garnica Romo; UMSNH, MEX

11:00-11:30 hrs. Coffee Break

11:30-12:00 hrs. Invited Talk: “Behavior of Silver Nanoparticles in Natural and Synthetic Zeolites”.- Rafael Ramírez Bon; CINVESTAV-IPN, MEX

12:00-12:20 hrs. (O8-1) “A Protected Annealing Process for the Production of Colloidal Iron Doped Zircon Fe-ZrSiO_4 ”.- Guillermo Manuel Herrera Pérez; Universidad de Valencia, ESP

12:20-12:40 hrs. (O8-2) “AC Susceptibility Study of a Magnetite Magnetic Fluid $\text{Mn}_x\text{Fe}_{3-x}\text{O}_4$ ($x = 0.1, 0.3$ and 0.5)”.- Eutiquio Barrientos Juárez; CIMAV, MEX

12:40-13:00 hrs. (O8-3) “Incorporación de Nano-sílices en Concretos Autoconsolidables”.- Francisco Vázquez Ramírez; CEMEX, MEX

13:00-13:20 hrs. (O8-4) “Columnar Nano-tracks in Silica and Quartz Induced by Electronic Excitation Mechanisms with Swift Ions; Fine Tuning of Optical Properties for Applications in Photonics”.- Antonio Rivera; Universidad Politécnica de Madrid, ESP

13:30-14:00 hrs. Invited Talk: “Bismuth Nanostructured Derivatives and Some Potential Applications”.- David Díaz; FQ-UNAM, MEX

14:00-16:30 hrs. Lunch

16:30-18:30 hrs. Poster Session II – PII codes (–Primer patio–)

18:30 - 19:30. Keynote Lecture: “The Nanostructured Catalysts Based on Au for Environmental Chemistry”.- Sergio Fuentes; CNyN-UNAM, MEX

19:30 hrs. Closing Ceremony