



MEXICAN OPTICS AND  
PHOTONICS MEETING  
19 al 21 de septiembre del 2012  
San Luis Potosí, México



## Mexican Optics and Photonics Meeting 2012

# Technical Program

San Luis Potosí, S. L. P., September 19-21, 2012.  
[www.amo-ac.mx](http://www.amo-ac.mx)



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Unidad de Posgrados of the Universidad Autónoma de San Luis Potosí.  
Sierra Leona 550, Lomas 2da. Secc., 78210, San Luis Potosí, S. L. P.



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## Foreword

The **Mexican Optics and Photonics Meeting** is a new forum developed by the *Academia Mexicana de Óptica*, intended to provide the Mexican optics and photonics high impact scientific research and technological results, with an international visibility.

The **Mexican Optics and Photonics Meeting** is a three days conference, having the participation of world-wide recognized plenary speakers in the hot areas of optics and photonics.

The **Mexican Optics and Photonics Meeting** also includes a stringent selection of invited speakers, presenting their most recent and relevant research results, which altogether, constitute a genuine sample of the fields, quality and impact, of the optics and photonics scientific research and technological development reached in Mexico.

In order to promote the integration of the current research groups in optics and photonics of Mexico, the **Mexican Optics and Photonics Meeting** will also have poster sessions with a selection of refereed voluntary contributions.

From today and ahead, the **Mexican Optics and Photonics Meeting** will become the place to learn of the hot Mexican optics and photonics.

Eric Rosas  
Oracio C. Barbosa García



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## Organizing Committees

### **MOPM 2012 Director**

Alfonso Lastras Martínez  
Instituto de Investigación en Comunicación Óptica (IICO)  
Universidad Autónoma de San Luis Potosí (UASLP)

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Luis Felipe Lastras Martínez (IICO-UASLP)  
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Norberto Arzate Plata (CIO)  
Julio César Gutiérrez Vega (ITESM)  
Raúl Hernández Aranda (ITESM)

# MOPM

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## Organized by



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Mexico Territorial Committee for Optics  
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Universidad Autónoma de San Luis Potosí



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**Program at a Sight**

<b>Time</b>	<b>Wednesday 19</b>	<b>Thursday 20</b>		<b>Friday 21</b>
08h00	Registration	Registration		Registration
08h30	Opening Ceremony			
09h00	Plenary Talk David Aspnes North Carolina State University, U. S. A. A Century of Plasmonics	Plenary Talk 2 Phil Bucksbaum Stanford University, U. S. A. Atomic and Molecular Physics at the LCLS X-Ray Laser		Plenary Talk 3 Luis Adolfo Orozco NIST-UM Joint Quantum Institute, U. S. A. Evanescent Fields in Nanofibers
10h15	Research Parallel Session. Invited Talks	Research Parallel Session. Invited Talks		Research Parallel Session. Invited Talks
11h00	Coffee Break	Coffee Break		Coffee Break
11h30	Research Parallel Session. Invited Talks	Research Parallel Session. Invited Talks		Research Parallel Session. Invited Talks
13h00	Lunch			Lunch
13h15		Plenary Talk 4 Francisco Ramos Gómez UNAM, Mexico. SISMENEC: A Meeting Place for Industry, Consumers and Academia		
14h00		Lunch		
15h00	Posters Session. Selected Contributions & Coffee Break	Plenary Talk 5 Ricardo Benjamín Ávila Suárez Industrias Tonali, Mexico. Linking Academia & Business: The Experience of “Industrias Tonalá”		Posters Session. Selected Contributions & Coffee Break
15h30		Coffee Break		
16h15	Luis Felipe Lastras IICO, UASLP, Mexico. Modulated Spectroscopies Short Course	Research Parallel Session. Invited Talks		Andrei Gorbachev IICO, UASLP, Mexico. Semiconductor diodes lasers Short Course
16h30		Outreach Parallel Session. Invited Talks		
17h15	AMO XXV Anniversary Ceremony Honor Wine	AMO General Assembly	OSA & SPIE Student Chapters Meeting	Closing Ceremony
18h00				
20h00	Gala Dinner			



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**Wednesday, September 19, 2012.**

08h30-09h00	Opening Ceremony	
09h00-10h00	David Aspnes North Carolina State University, U. S. A. A Century of Plasmonics Session Chair: Alfonso Lastras Martínez	
10h15-11h00	Session Chair: Amalia Martínez García Daniel Malacara Hernández CIO Design of Schmidt-Cassegrain Aplanatic Telescopes S10	Session Chair: Amparo Rodríguez Cobos Wolf Luis Mochán Backal UNAM Macroscopic Properties and Photonic Propagation in Metamaterials S1F
11h00-11h30	Coffee Break	
11h30-12h15	Eduardo Tepichín Rodríguez INAOE Objective Performance of a Set of Uncorrected 20/20 Normal Eyes: Clinical Reference S2O	Eduardo Gómez García UASLP Precision Measurements Using Cold Atoms in Optical Traps S2F
12h15-13h00	Fernando Mendoza Santoyo CIO 3D Digital Holographic Interferometry: Biomedical Applications S3O	Eugenio Rafael Méndez Méndez CICESE Goos-Hänchen Shifts with Random Fields S3F
13h00-15h00	Lunch	
15h00-16h30	Posters Session SM1 MOPM-2012-OP-01 to MOPM-2012-OP-20 MOPM-2012-PH-01 to MOPM-2012-PH-20 Session Chair: Norberto Arzate Plata	
16h30-18h00	Short Course SFA Luis Felipe Lastras UASLP Modulated Spectroscopies	
18h00-20h00	AMO XXV Anniversary Ceremony Honor Wine	



## Thursday, September 20, 2012.

09h00-10h00	Phil Bucksbaum Stanford University, U. S. A. Atomic and Molecular Physics at the LCLS X-Ray Laser Session Chair: Ramón Rodríguez Vera	
10h15-11h00	Session Chair: Raúl Balderas Navarro Diana Tentori Santa Cruz CICESE Polarization Performance of Twisted Erbium-Doped Fibers S4O	Session Chair: Luis Felipe Lastras Martínez Jorge Alberto Gaspar Armenta USON Interaction of Light with Metallic Cylinders S4F
	Coffee Break	
11h30-12h15	Jorge Ojeda Castañeda UGTO Tunable Depth of Field with High Resolution S5O	José Luis Maldonado Rivera CIO Research and Applications of Plastic Optoelectronics and Photonics S5F
12h15-13h00	Gustavo Rodríguez Zurita BUAP Modulation of Polarization in Phase-Shifting Interferometry S6O	Manuel Fernández Guasti UAM Energy Content of Ultrafast Chirped Pulses S6F
13h15-14h00	Francisco Ramos Gómez UNAM, Mexico. SISMENEC: A Meeting Place for Industry, Consumers and Academia Session Chair: Eric Rosas	
14h00-15h30	Lunch	
15h30-16h15	Ricardo Benjamín Ávila Suárez Industrias Tonali, Mexico. Linking Academia & Business: The Experience of “Industrias Tonaly” Session Chair: Oracio Barbosa	
16h15 - 16h30	Coffee Break	
16h30-17h15	Session Chair: Julio César Gutiérrez Vega Kurt Bernardo Wolf Bogner UNAM 40 Years in Linear Canonic Transforms Development S7O	Session Chair: Luis Felipe Lastras Martínez Roberto Ortega Martínez UNAM Ultra Short Laser Pulse Characterization Techniques S7F
	Enrique Rivera Garibaldi Grupo SISA, Mexico. CALIPO –GRUPO SISA: Experience in a High-Tech Business in México S1V	Jorge Raymundo Loredó Murphy UANL, Mexico. Triple Helix Links S2V
18h00-19h00	AMO General Assembly Auditorium	OSA & SPIE Student Chapters Meeting Room 7
20h00-24h00	Gala Dinner Hotel Panorama	



## Friday, September 21, 2012.

09h00-10h00	<p>Luis Adolfo Orozco NIST-UM Joint Quantum Institute, U. S. A. Evanescent Fields in Nanofibers Session Chair: Eric Rosas</p>	
10h15-11h00	Session Chair: Oracio Barbosa	Session Chair: Andrei Gorbachev
	<p>Carlos Gerardo Treviño Palacios INAOE Millimeter-Terahertz Instrumentation S8O</p>	<p>Bernardo Mendoza Santoyo CIO Optical Coherent Current Control at Surfaces: Theory of Injection Current and Spin Generation S8F</p>
11h00-11h30	Coffee Break	
11h30-12h15	<p>Julio César Gutiérrez Vega ITESM Pancharatnam-Berry Phase for Optical Systems S9O</p>	<p>Nikita Pikhtin Ioffe Institute, Russia. High Power CW and Pulsed Diode Lasers based on Separate Confinement Quantum Well Double Heterostructures S9F</p>
12h15-13h00	<p>Luis Vidal Ponce Cabrera IPN Laser Ablation for Thorns Removal of Opuntia S10O</p>	<p>Raúl Rangel Rojo CICESE Nonlinear Optical Properties of Anisotropic Metallic Nanocomposites S10F</p>
13h00-15h00	Lunch	
15h00-16h30	<p>Posters Session SM2 MOPM-2012-OP-21 to MOPM-2012-OP-44 MOPM-2012-PH-21 to MOPM-2012-PH-31 Session Chair: Raúl Hernández Aranda</p>	
16h30-18h00	<p>Short Course SFA2 Andrei Gorbachev UASLP Semiconductor Diodes Lasers</p>	
18h00-18h30	Closing Ceremony	



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## Poster Contributions

- MOPM-2012-OP-01** Method for Breast Cancer Detection: Calcification & Mass Malignant  
R. Guzmán Cabrera, J.R. Guzmán Sepúlveda, M. Torres Cisneros, J. Ruiz Pinales, O.G. Ibarra Manzano
- MOPM-2012-OP-02** Rotation Invariant Correlation Using an Adaptive Methodology  
Alfredo Solís Ventura, Josué Álvarez Borrego
- MOPM-2012-OP-03** Pattern Recognition in Digital Images by Binary Concentric Rings Optimal Masks  
Selene Solorza, Josué Álvarez Borrego
- MOPM-2012-OP-04** Some Statistical Properties of Surface Slopes from Glitter Patterns Considering a Non-Gaussian Probability Density Function  
Josué Álvarez Borrego, Beatriz Martín Atienza
- MOPM-2012-OP-05** Angle Reduction of the Object Wave in Digital Holography  
Gilbert F. Pérez García, J. M. Flores Moreno, Amalia Martínez García, J. A. Rayas
- MOPM-2012-OP-06** Quantification of Corrosion Products Formation onto a Copper Sample by Digital Holographic Microscopy  
J. A. Marbán Salgado, J. Uruchurtu Chavarín, D. Mayorga Cruz
- MOPM-2012-OP-07** Theoretical and Experimental Characterization of Optical Spatial Solitons in Liquid Crystals  
E. Ordoñez Flores, A.A. Rodríguez Rosales, C.J. Román-Moreno, J. Garduño Mejía, O.G. Morales Saavedra, R. Ortega-Martínez
- MOPM-2012-OP-08** Fringe Projection Profilometry System Using a Cyclic Shear Interferometer  
Analia Sicardi Segade, Amalia Martínez García, N. I. Toto Arellano, Juan Antonio Rayas
- MOPM-2012-OP-09** Digital Post-Processing for Extended Depth of Field  
E. Yepez Vidal, E. García Almanza, C. A. Rivera-Romero, M. López Ramírez, L. M. Ledesma-Carrillo, E. Cabal Yepez, A. García Pérez, J. Ojeda Castañeda
- MOPM-2012-OP-10** Analysis of a Parabolic Collector and its Coupling with a Plastic Optical Fiber  
Guillermo Sánchez, Perla Viera, Victoria Navarro Franco, Gustavo Cárdenas Ortiz, Daniel Ceballos, Romeo Selvas
- MOPM-2012-OP-11** Optical Nonlinearity of Native Collagen Fibers and Fibrils Grown *in vitro*: A Nonlinear Optical Microscopy and Spectroscopy Study  
Cindy Fuentes Grethel Corona, Rebecca Younger, Eric Olaf Potma, Israel Rocha Mendoza
- MOPM-2012-OP-12** Refractive Index Measurement of Metallic and Dielectric Thin Film Using Surface Plasmon Resonance and Brewster-Abeles Technique  
Y. M. Espinosa Sánchez, D. Luna Moreno, E. Noé Arias, G. Garnica Campos



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**MOPM-2012-OP-13** Hybrid Method Reduces the Spherical Aberration in the Human Eye

J. F. Aguilar Gutiérrez, M. L. Arroyo Carrasco, M. D. Iturbe Castillo

**MOPM-2012-OP-14** Speckle Interferometer Based on a Two Aperture Common-Path Interferometer

Antonio Barcelata Pinzon, Cruz Meneses Fabian

**MOPM-2012-OP-15** Generating Anaglyph Images Using Spectral Density Functions

Yolanda Yanet López Domínguez, Amalia Martínez García

**MOPM-2012-OP-16** Phase-Shifting Interferometry by the Modulation of the Wave Amplitude: The General Case

Uriel Rivera Ortega, Cruz Meneses Fabian

**MOPM-2012-OP-17** Polynomial Representations of Wavefront Aberrations

Armando Gómez Vieyra, Daniel Malacara Hernández, Carlos A. Vargas, Ricardo B. Flores Hernández

**MOPM-2012-OP-18** Optofluidic System Design for Particles Manipulation

Heriberto Carlos Ayala Cruz, Víctor Ruiz Cortés

**MOPM-2012-OP-19** Testing a Parabolic Trough Solar Collector by Using a Single Flat Null Screen

V.I. Moreno Oliva, E. Román Hernández, A. Castañeda Mendoza, M. Campos García

**MOPM-2012-OP-20** Phase Changed and Sensitivity in Optical Fiber when Pressure is Applied

Pulido Navarro M. G., Álvarez Chávez J. A.

**MOPM-2012-OP-21** Instantaneous Phase Shifting System for Temperature Fields Measurements

David Serrano García, Amalia Martínez García, Noel Iván Toto Arellano, J. A. Rayas, Gustavo Rodríguez Zurita

**MOPM-2012-OP-22** Measuring the Speed of Sound in Crystal-Violet/Water Dissolutions via Photoacoustic Technique

V. Torres-Zúñiga, R. Castañeda Guzmán, S.J. Pérez Ruiz, O.G. Morales Saavedra

**MOPM-2012-OP-23** Barker Sequences as Spatial Filters: Null Test

Pedro A. Cerna García, A. Saucedo-Carvajal, Jorge Ojeda-Castañeda

**MOPM-2012-OP-24** Effects of the Optical Path Lengths in an Optical Fiber Interferometer

Perla Viera González, Guillermo Sánchez Guerrero, Romeo Selvas Aguilar, Daniel Ceballos Herrera, Candelario Guajardo-González, Valentín Guzmán Ramos, Carlos Martínez Hernández

**MOPM-2012-OP-25** Measurement of the Dragging Force in Grinding Optical Surfaces as a Function of Relative Velocity between Glass and Tool

Alberto Cordero Dávila, Carina Gutiérrez Ojeda, Saldivia Gomez Elizabeth

**MOPM-2012-OP-26** Tapered Er-Doped ASE Fiber Source Design

G.G.Pérez Sánchez, J.A. Alvarez Chávez



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**MOPM-2012-OP-27** Identification of Acrylic Fibers: Differentiation of Mmethyl Acrylate and Vinyl Acetate Comonomer by Polarized Raman Spectroscopy

R. González Mota, C.M. Rodríguez Cuéllar, C. Frausto Reyes, J.J Soto Bernal, I. Rosales Candelas, E. I. Muñoz-Campos

**MOPM-2012-OP-28** Phase Diagram for Tin-Lead Soldering Irradiated With CO<sub>2</sub> Laser

J. Mascorro Pantoja, J.J. Soto Bernal, M. Nieto Pérez, R. González Mota, I. Rosales Candelas, A. Cardoza Rodríguez

**MOPM-2012-OP-29** Reducing the Impact of Focus Errors with Multiple-Frame Photography

E. Yépez Vidal, E. García Almanza, Jorge Ojeda Castañeda

**MOPM-2012-OP-30** Can the Experimental Synchronization between Dragging Force and Glass Rotation Explain Astigmatic Surface Production?

Cordero Dávila Alberto, Saldivia Gomez Elizabeth, Carina Gutiérrez Ojeda

**MOPM-2012-OP-31** Evaluation of the Principal Radius of Curvature of a Convex Surface with the Null-Screen Method

Manuel Campos García, Amílcar Estrada Molina, Rufino Díaz Uribe

**MOPM-2012-OP-32** Ronchi-Test Visibility as a Function of Illumination Source Size and Duty Cycle of the Ruling

Alberto Cordero Dávila, Javier Álvarez Jiménez

**MOPM-2012-OP-33** Generation of Spiral Optical Vortices in a Mach-Zehnder Interferometer

Areli Montes Pérez, Gustavo Rodríguez Zurita, Cruz Meneses Fabián, Carlos Robledo Sánchez, Amalia Martínez García, Noel Iván Toto Arellano

**MOPM-2012-OP-34** Visual Interface in LabVIEW for Measurement of Stokes Parameter in Scalar and Vector Field

Gildardo Pablo Lemus Alonso, Cruz Meneses Fabian, Rosaura Kantun Montiel

**MOPM-2012-OP-35** Phase-Shift Interferometry for Optical Elements Characterization

Rosaura Kantun Montiel, Cruz Meneses Fabian, Gildardo Pablo Lemus Alonso

**MOPM-2012-OP-36** Approximate Determination of the Maximum Power Stored in Stokes Lines Generated in Silica Fibers

L. de la Cruz May, J. A. Álvarez Chávez, M. May Alarcón, F. Méndez, M.L. Estrella Rosas, M. J. Vázquez López, P. Mollinedo

**MOPM-2012-OP-37** All-Fiber Modal Interferometer Based on a Single Fiber Taper

G. Salceda-Delgado, A. Martínez Ríos, D. Monzón Hernández

**MOPM-2012-OP-38** Objects Recognition by Using Identity Vectors Signatures

Claudia Fimbres Castro, Josué Álvarez Borrego

**MOPM-2012-OP-39** Nonlinear Correlation by Using Vectorial Signatures to Recognize Objects Embedded in Inhomogeneous Illumination

Claudia Fimbres Castro, Josué Álvarez Borrego



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**MOPM-2012-OP-40** Invariant Correlation Using a Binary Mask Applied to Binary and Gray Images  
Josué Álvarez Borrego, Selene Solorza, Mario Alonso Bueno Ibarra

**MOPM-2012-OP-41** Design of Digital Odometer Using Optical Sensors for Uses in Teaching Automotive Mechanics  
Gilberto Sánchez Mares, Norman Andrés Herrera Hernández

**MOPM-2012-OP-42** Characterization of the Sensitivity of Fiber Bragg Gratings by Temperature Changes  
M. May Alarcón, W. A. Silva Martínez, J. A. Cobá Ramos, F. Méndez Martínez, L. de la Cruz-May, R.A. Vázquez Sánchez, H.H. Cerecedo Núñez

**MOPM-2012-OP-43** Dynamic Phase Profile of Phase Objects  
N.I. Toto Arellano, D. I. Serrano García, A. Martínez García, G. Rodríguez Zurita, A. Montes Pérez, J. M. Miranda Gómez, G. Resendiz López, A. González Rosas, L. García Lechuga

**MOPM-2012-PH-01** Class and Grade Steel Classification by Laser-Induced Breakdown Spectroscopy (LIBS) and Principal Component Analysis (PCA)  
U. Contreras, M.A. Meneses Nava, J. Robles Camacho, Gabriel Ramos Ortiz, J.L. Maldonado, O. Barbosa García

**MOPM-2012-PH-02** Photonic Band Structure of a Dynamic Medium Whose Permittivity and Permeability are Modulated Periodically in Time  
O. M. Becerra-Fuentes, P. Halevi

**MOPM-2012-PH-03** Residual Birefringence Cancellation in an Optical Fiber Pump Multiplexer (980 nm/1550 nm) Working at 20 °C  
Rodríguez García Jorge Arturo, Tentori Santa Cruz Diana, Farfán Sánchez Miguel

**MOPM-2012-PH-04** Femtosecond Pulse Compression in a Hollow-Core Photonic Bandgap Fiber by Tuning its Cross Section  
N. González-Baquedano, N. Arzate, I. Torres Gómez, A. Ferrando, D. E. Ceballos Herrera, C. Milián

**MOPM-2012-PH-05** Photorefractance Anisotropy of Low Dimensional Structures  
J. V. González Fernández, R. E. Balderas Navarro, A. Lastras Martínez, L. F. Lastras Martínez, T. Mozume, S. Gozu, J. Ortega Gallegos, I. Lara Velázquez

**MOPM-2012-PH-06** High Speed Femtosecond Pulse Characterization Based on Spectral Interferometry  
G. Castro Olvera, J. Garduño Mejía, C. J. Román Moreno, R. Ortega-Martínez

**MOPM-2012-PH-07** 32-Channel Rapid Reflectance-Difference Spectrometer  
O. Núñez Olvera, R.E. Balderas Navarro, J. Ortega Gallegos, L.E. Guevara Macías, L.F. Lastras Martínez, A. Lastras Martínez

**MOPM-2012-PH-08** Raman Spectroscopy and Multivariate Analysis for the Determination of Raw Material Provenance of Archeological Travertine Objects  
M.A. Meneses Nava, J. Robles Camacho, O. Barbosa García, J.L. Maldonado, G. Ramos Ortiz





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**MOPM-2012-PH-09** White LEDs Spectral Mismatch Correction Factor Dependence on the Photometric Detector Spectral Responsivity

A. Estrada Hernández, E. Rosas, L. P. González Galván, N. Vidal Medina, R. González Mota

**MOPM-2012-PH-10** Study of InGaAs/GaAs(001) Growth with Time-Resolved Reflectance Difference Spectroscopy

A. Armenta Franco, O. Núñez Olvera, J. Ortega Gallegos, R.E. Balderas Navarro, L.F. Lastras Martínez, A. Lastras Martínez

**MOPM-2012-PH-11** Scorpion Venom Study by Raman Spectroscopy

Brenda Esmeralda Martínez Zérega

**MOPM-2012-PH-12** Light-by-Light Polarization Control in Four-Wave Mixing in Cubic Crystals with Optical Kerr Effect

G. A. Graciano Armenta, A. V. Khomenko, J. H. Castro-Chacon, M. A. García Zárate

**MOPM-2012-PH-13** Acousto-Optic Interaction in Tapered Fibers

M. Bello Jiménez, A. Díez, J. L. Cruz, M. V. Andrés, A. Rodríguez Cobos, G. Ramírez-Flores

**MOPM-2012-PH-14** Noise and Artifact Characterization of *in-vivo* Raman Spectroscopy Skin Measurements

Miguel G. Ramírez Elías, Javier Alda, Francisco J. González

**MOPM-2012-PH-15** Classification of Minerals Using Nonlinear Correlation of Raman Spectrum Data

José Luis Poom Medina, Josué Álvarez Borrego

**MOPM-2012-PH-16** Nonlinear Optical Response of Colloidal and Films Gold Nanoparticles Synthesized by Chitosan

A. Balbuena Ortega, M.L. Arroyo Carrasco, V. L. Gayou, A. Orduña Díaz, R. Delgado Macuil, M. D. Iturbe Castillo

**MOPM-2012-PH-17** Classification of Calcium Carbonate Minerals by Raman Spectroscopy and Principal Component Analysis

M.A. Meneses Nava, J. Robles Camacho, O. Barbosa García, J.L. Maldonado, G. Ramos Ortiz, I.R. Rosas Román

**MOPM-2012-PH-18** Tinkerbelle Beam in a Ring Resonator

V. Aboites

**MOPM-2012-PH-19** Real-Time Anisotropic Reflectance Spectroscopy: MBE Growth of Al<sub>x</sub>Ga<sub>1-x</sub>As on GaAs (001)

K. Hernández Vidales, L. E. Tapia Rodríguez, J. Ortega Gallegos, O. Núñez Olvera, A. Armenta-Franco, A. Lastras Martínez, L. F. Lastras Martínez, R. E. Balderas Navarro

**MOPM-2012-PH-20** Thickness Dependence of the Nonlinear Optical Response of Ag Nanoparticles Embedded in SiO<sub>2</sub>

Héctor Sánchez Esquivel, Raúl Rangel Rojo, Alicia Oliver, Luis Rodríguez Fernández

**MOPM-2012-PH-21** Transient-Thermo-Reflectance for the Study of Surface Carrier Dynamics

B.G. Pérez Hernández, J. Garduño Mejía, C. J. Román Moreno, O. G. Morales Saavedra, R. Ortega Martínez



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**MOPM-2012-PH-22** High-Efficiency LEDs Luminous Intensity Spatial Measurement at CENAM  
N. Vidal Medina, E. Rosas, L. P. González Galván, A. Estrada Hernández, Juan B. Hurtado Ramos

**MOPM-2012-PH-23** Modeling and Simulation of Chaotic Behavior  
Gilberto Sánchez Mares, Norman Andrés Herrera Hernández

**MOPM-2012-PH-24** Lasing Properties of Novel Fluorene Polymers  
S. Romero Servin, R. Carriles, G. Ramos Ortíz, J.L. Maldonado, M. G. Zolotukhin

**MOPM-2012-PH-25** Micro Reflectance Difference Spectroscopy  
L. F. Lastras Martínez, R. Herrera Jasso, N. Ulloa Castillo, R. E. Balderas Navarro, J. Ortega Gallegos, A. Lastras Martínez

**MOPM-2012-PH-26** Real Time Study of the Evolution of a Arsenic-Rich c(4x4) to a Gallium-Rich GaAs(001) Surface by Anisotropic Reflectance Spectroscopy  
L. E. Guevara Macías, A. Lastras Martínez, J. Ortega Gallegos, O. Núñez Olvera, R. E. Balderas Navarro, L. F. Lastras Martínez

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I. Severiano Carrillo, M. M. Méndez Otero, M. L. Arroyo Carrasco, M. D. Iturbe Castillo

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Marcela Sosa Saldaña, Teresa Flores Reyes, Kriss Dialis Mejías, Luis Ponce Cabrera, Miguel Arronte Garcia, Eduardo de Posada Piñán

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