SESSION 1 (Tuesday 09h00 – 10h30, Room Cedro 1): Optoelectronics, Optronics and Photonics I

INVITED: Solution Processing of Polymer Photovoltaic Solar Cells in Air or Under Inert Atmosphere.
M. Dang, G. Wantz, L. Hirsch and J. Parneix

Stadium Cavity Optical Resonator Fabricated by Focused Ion Beam
Adenir daSilva Filho, Luis Barea, Alfredo Vaz and Newton Frateschi

Fabrication and Characterization of Active Pixel Sensors (APS) Using Simple Metal Gate nMOS Technology
André Santos de Oliveira Furtado, José Alexandre Diniz and Davies William de Lima Monteiro

SESSION 2 (Tuesday 11h00 – 12h30, Room Cedro 1): Modeling and Characterization I

INVITED: Thermal Effects in Fully-Depleted SOI Devices.
Dragica Vasileska, Katerina Raleva and Stephen M. Goodnick

The Effect of Microstructure on Electromigration-Induced Failure Development
Roberto Lacerda de Orio, Hajdin Ceric, Johann Cervenka and Siegfried Selberherr

Extraction of MOSFET Model Parameters from the Measured Source-to-drain Resistance
Francisco J. García-Sánchez, Juan Muci, Denise C. Lugo Muñoz, Alvaro D. Latorre Rey, Adelmo Ortiz-Conde, Ching Ho and Juin J. Liou
SESSION 3 (Tuesday 11h00 – 12h30, Room Cedro 6):
Optoelectronics, Optronics and Photonics II

INVITED: Artificial electromagnetic materials - new twist of light,
M.Yu.Barabanenkov and V.V.Kazmiruk

Wavefront sensor using double-efficiency quad-cells for the measurement of high-order ocular aberrations
Luciana P. Salles, Otávio Gomes de Oliveira, Davies W. de Lima Monteiro

Phase-Shift Photomask Designed by Scalar Diffraction Theory
Giuseppe Cirino, Ronaldo Mansano, Patrick Verdonck, Lucila Cescato, Euclydes Marega Jr., Luiz Neto

SESSION 4 (Tuesday 14h00 – 16h00, Room Cedro 1):
Optoelectronics, Optronics and Photonics III

Porous Silicon Heterostructures for Refractometer Device Application
Danilo Roque Huanca and Walter Jaimes Salcedo

Fabrication and characterization of GeO2-PbO optical waveguides
Vanessa Cacho and Luciana Kassab

Computational Intelligence Optimization Method for AlGaAs/GaAs Quantum Well Solar Cells
Anderson Singulani, Patrícia Souza, Maurício Pires and Marco Pacheco

Superposition of Positive and Negative Contributions to the Photocurrent Spectrum of InAs/InAlGaAs/InP Quantum Dot Infrared Photodetectors
Thomas Gebhard, Deborah Alvarenga, Mauricio Pires, Karl Unterrainer, Paolo Sergio Guimares and Patricia Lustoza de Souza

Smart Solar Cluster: a Self-reconfigurable Photovoltaic Approach
Ágata Miranda Carvalho and Davies W. de Lima Monteiro

Intrinsically Self-Amplified CMOS Image Sensor
Patrick Santos and Davies W. de Lima Monteiro
Session 5 (Tuesday 14h00 – 16h00, Room Cedro 6):
Process Technology I

INVITED: Composite Electronic Materials for Supercapacitor Applications,
Mariem R. Rosario-Canales, Pravas Deria, Michael J. Therien, and Jorge J. Santiago-Aviles

Characterization of High-k Al2O3 Gate Dielectrics Prepared by Oxidation of Aluminum Thin Films
Giuliano Gozzi, Veronica Christiano, Stephanie Conceição, Victor Sonnenberg and Sebastião dos Santos Filho

Laser annealing of self-aligned As+ implants in contact windows for ultrashallow junction formation
Cleber Biasotto, Viktor Gonda, Lis K. Nanver, Johan van der Cingel and Vladimir Jovanovic

Sensitivity Analysis of Pd-MOS Structure for Hydrogenated Gases by Scanning Light Pulse Technique
Mauro Sergio Braga, Keth Rousbergue Maciel de Matos, Daniela de Souza Santos, Francisco Javier Ramirez-Fernandez and Walter Jaimes Salcedo

Structural Characterization of Arsenic Implanted SOI
Roana de Oliveira, Mateus Dalponte and Henri Boudinov

Session 6 (Tuesday 16h30 – 18h30, Room Cedro 1):
Process Technology II

INVITED: Optimization of e-beam Systems for Wafer Defect Inspection and for Die-to-Database Verification,
V.V.Kazmiruk and M.Yu.Barabanenkov

Study of Variations of the Electrospinning Process
Rogerio Furlan, Stefanie V. Arroyo, Ramon Torres, Joel A. M. Rosado and Ana N. R. da Silva

Three-Dimensional Plasma Etching Simulation using Advanced Ray Tracing and Level Set Techniques
Otmar Ertl and Siegfried Selberherr
Characterization of Gold-Formaldehyde Baths for Electrochemical Deposition
Juliana Lopes Cardoso and Sebastião Gomes dos Santos Filho

Electrodeposition of p-Cu2O Layers on Co/p-Si Planar Structures
Rafael Gallina Delatorre, Vagner Stenger, Vinicius Claudio Zoldan, Douglas Langie da Silva, Sebastião Gomes dos Santos and Andre Avelino Pasa

Session 7 (Wednesday 08h30 – 10h00, Room Cedro 1): FinFETs and Multiple-Gate FETs I

Analysis of the interface trap density in SOI FinFETs with different TiN gate electrode thickness through charge pumping technique
Michele Rodrigues, Moon Ju Cho, Joao Antonio Martino, Nadine Collaert, Abdelkarim Mercha, Eddy Simoen and Cor Claeyts

Influence of Fin Width and Channel Length on the Performance of Buffers Implemented with Standard and Strained Triple-Gate nFinFETs
Marcelo Pavanello, Joao Martino, Eddy Simoen, Rita Rooyackers, Nadine Collaert and Cor Claeyts

Analysis of the Total Resistance in Standard and Strained FinFET Devices With and Without the Use of SEG
Talitha Nicoletti, João Martino, Eddy Simoen and Cor Claeyts

Back-Gate Influence on the Mobility Behavior in Ultrathin FD SOI Devices
Carolina Santos, Sorin Cristoloveanu, Loan Pham Nguyen, Claire Fenouillet-Beranjer and João Antonio Martino

Session 8 (Wednesday 11h00 – 12h30, Room Cedro 1): Devices and Systems I

INVITED: Biomimetics: Learning From Nature To Make Better Sensors,
P.J. French, D.H.B. Wicaksono

INVITED: Nanoparticle Floating Gate Flash Memorie
S. K. Banerjee, F. Ferdousi, H. Liu and D. Ferrer

**Sensitive Continuous Monitoring of pH thanks to Matrix of several Suspended Gate Field Effect Transistors**
Bruno da Silva Rodrigues, Olivier De Sagazan, Samuel Crand, France LeBihan, Olivier Bonnaud, Tayeb Mohammed-Brahim and Nilton Itiro Morimoto

**Session 9 (Wednesday 11h00 – 12h30, Room Cedro 6): FinFETs and Multiple-Gate FETs II**

**DIBL Study Using Triple Gate Unstrained and Uniaxial/Biaxial Strained FinFETs**
Sara Dereste dos Santos, João Antonio Martino, Eddy Simoen and Cor Claeys

**Application of the Symmetric Doped Double-Gate Model in Circuit Simulation Containing Double-Gate Graded-Channel Transistors**
Esteban Contreras, Antonio Cerdeira, Joaquin Alvarado and Marcelo Antonio Pavanello

**Low Temperature and Silicon Thickness Influences on the Threshold Voltage of Double-Gate MOSFETs Considering a Charge Based Extraction Procedure**
Renan Trevisoli Doria and Marcelo Antonio Pavanello

**Fin Width Influence on The Harmonic Distortion of Standard and Strained FinFETs Operating in Saturation**
Rodrigo Trevisoli Doria, Antonio Cerdeira, João Antonio Martino, Eddy Simoen, Cor Claeys and Marcelo Antonio Pavanello

**Session 10 (Wednesday 14h00 – 15h30, Room Cedro 1): Modeling and Characterization II**

**A Novel Overlapping Circular-Gate Transistor and its Application to Power MOSFETs**
Jader A De Lima and Salvador P Gimenez

**The Influence of Poly-Si/SiGe Gate in Threshold, Sub-Threshold Parameters and Low Frequency Noise in p-MOSFETs**
Using Cynthia SOI MOSFET to Improve Voltage Gain of Analog Integrated Circuits
Denis Rodrigo Oliveira and Salvador Pinillos Gimenez

Impact of Confinement and Stress on the Subband Parameters in Ultra-Thin Silicon Films
Viktor Sverdlov, Oskar Baumgartner, Thomas Windbacher, Franz Schanovsky and Siegfried Selberherr

Session 11 (Thursday 08h30 – 10h30, Room Cedro 1):
Poster Flash Presentations

Electrodeposition of Au-Sn Alloys from a Modified Non-Cyanide Bath
Juliana Lopes Cardoso and Sebastião Gomes dos Santos Filho

Customized Polynomial Contact Lenses via Wet Etching
Rodolfo F. de Oliveira Costa, Thiago B. Teixeira, Marco Antonio Souza Jardim, Beijamim R. de Souza and Davies W. de Lima Monteiro

Study of TiOxNy MOS Capacitors
Katia Albertin, Takuya Niwa, Bruno Nobaro, Denise Souza, Alejandro Zuñiga and Inés Pereyra

Comparative Study of MDMO-PPV Thin-Film Transistors Using Thermal SiO2 and PECVD Silicon Oxynitride as Insulator
Marco Roberto Cavallari, Katia Franklin Albertin, Gerson dos Santos, Carlos Alberto Santos Ramos, Inés Pereyra, Fernando Josepetti Fonseca and Adnei Melges de Andrade

CdS-Decorated Multi-Walled Carbon Nanotubes as a Material for New Devices
Marcos Flávio Silva, Wagner Rodrigues, Luiz Orlando Ladeira, Douglas Rodrigues and Carlos Basílio Pinheiro

Study of a-Si1-XCX:H Thin Films Obtained by PECVD in Temperatures Lower than 250°C Aiming Applications in Optics, Thin Films Devices on Polymeric Substrate and MEMS
Deposition of Carbon Nanotubes on Silicon for Field Emission Application
Michel Dantas, Elisabete Galeazzo, Henrique Peres, Francisco Ramirez-Fernandez, Eric Diniz and Ricardo Castro

Influence of Electronegative Gas on the Efficiency of Conventional and Hollow Cathode Magnetron Sputtering Systems
Diego Duarte, Marcos Massi, Argemiro Sobrinho, Leandro Tezani, Luis Fontana and Homero Maciel

Electrical Characterization of Undoped, N- and P-Type Thermal Annealed PECVD SiC Films Deposited on Transparent Insulator Substrates
Alessandro Ricardo de Oliveira, Inés Pereyra and Marcelo Nelson Páes Carreño

Highly Effective Etching via Excimer Irradiation and Gradually Module Tool
P.S. Pa

Characterization of Cu/Cu0.4Ni0.4P0.2 Thermocouples Fabricated on Silicon Surfaces Using Electroless Deposition
Fernando Parra, Sebastião Santos Filho, Angelo Marques and Sandro Martini

Ni-P, Ni-B and SiO2 as Materials for Hard Mask in Deep Silicon Etching for MEMS Fabrication using ICP reactor
Alcinei Nunes, Stanislav Moshkalev, Clovis Fischer, Peter Tatsch and Alexander Flacker

OPTICAL DIAGNOSTICS OF SF6 LOW PRESSURE PLASMA JET APPLIED TO SILICON ETCHING
Rodrigo Sávio Pessoa, Leandro Tezani, Shirley Wakavaichi, Homero Santiago Maciel and Gilberto Petraconi

Semiconductor microcavity: an intrinsic optical transistor.
Eduardo Cotta

A possible Organic Solar Cell Based on Buriti Oil
Elizete Silva, Artemis Ceschin

Design of a Compact CPW Antenna using MTM-MEMS
Georgina Rosas, Roberto Murphy and Alonso Corona
Ladder Type SAW Filters Using Quasi-Synchronous Resonators with Thinned Density of Randomly Distributed "Hot" Electrodes
Che-Uk Kim, Serguei Balashov, Victor Plessky, C. W. Nam and L. K. Chul

Performance analysis of single-electron NAND gates
Lorena Silva and Janaina Guimaraes

PDMS (Polydimethylsiloxane) Microfluidic Chip Molding for Love Wave Biosensor
Hakim Tarbague, Jean-Luc Lachaud, Serge Destor, Luc Vellutini, Jean-Paul Pillot, Bernard Bennetau, Daniel Moynet, Dominique Rebière and Corinne Dejous

A Study of the Geometrical Correction Factor on the Sensitivity of the Transversal Piezoresistive Sensors
Guilherme de Oliveira Coraucci, Rafael Vitor Degani de Oliveira and Fabiano Fruett

A new fabrication technique of planar metallic microstructures on alumina substrate
Juvenil Severino Junior Costa, Alexandre Flacker and Fabiano Fruett

CNTFET Modelling to Design Analog and Digital Circuits
Roberto Marani and Anna Gina Perri

The Impact of CMOS Logic Gate Topologies on Performance Variability
Digeorgia da Silva, André Reis and Renato Ribas

Session 12 (Thursday 14h00 – 16h00, Room Cedro 1):
Devices and Systems II

Multiwall Carbon Nanotubes Decorated with Metal Oxide Nanoparticles for Gas Sensing Applications
Rogerio Gelamo, Carla Verissimo, Alireza Abbaspourrad, Alfredo Vaz, Francisco Rouxinol, Oswaldo Alves and Stanislav Moshkalev

Feasibility Study of Analog and Digital Temperature Sensors in Nanoscale Technologies
Max Geljón, Frank Sill and Davies William de Lima Monteiro

Development of Optimal Symmetric Focused SAW Atomizers for Nanoliter Single Droplet Atomization
INVITED: Metallization Technologies and Strategies for Plastic Based Biochips, Sensors and Actuators for Healthcare and Medical Applications,  
Yosi Shacham-Diamand, Slava Krylov, Gil Rosenman, Tsivi Shmilovich, Rakefet Ofek Almog , Nicolai Fishelson and Yelen Sverdlov

Radiation Effects on SOI Microrelays for Space Applications  
Alex Lozano, Felix Palumbo and Martín Alurralde

Electrochemical Migration on Lead-Free Soldering of PCBs  
Luiz Tadeu Freire Mendes, Valtemar Fernandes Cardoso and Ana Neilde Rodrigues da Silva

Fabrication Process of Ag/AgCl Reference Pseudo-Electrode Based on Electrodeposition of Au on Pt Surfaces from Formaldehyde Baths: Chemical Stability and Adherence  
Fernando L. de Almeida, Sebastião G. dos Santos Filho, Juliana L. Cardoso, Massaki O. Igarashi, Cecilia Jiménez-Jorquera and Marcelo B. Andrade Fontes

Flow-injection Analysis technique used to electrochemically measure nitrite through a gold working electrode modified with 1-2 diaminobenzene (DAB).  
Fernando L. de Almeida, Sebastião G. dos Santos Filho and Marcelo B. Andrade Fontes

On the Performance of Thin-Film Lateral SOI PIN Diodes as Thermal Sensors in a Wide Temperature Range  
Michelly de Souza, Bertrand Rue, Denis Flandre and Marcelo Pavanello

Transformation Between Power-law and Polynomial Thin-Film Transistor Models  
Adelmo Ortiz-Conde, Francisco J. García Sánchez and Juan Muci
Reduction in on-resistance of LDMOS transistor for improved RF performance
Ahsan Kashif, Christer Svensson and Qamar Wahab

Equivalent Circuit for NBTI Evaluation in CMOS Logic Gates
Nivea Schuch, Vinicius Dal Bem, André Inácio Reis and Renato Perez Ribas