AOP 2014

II International Conference on Applications of Optics and Photonics

26-30 May 2014 | Aveiro, Portugal

CONFERENCE BOOKLET

SPOF

instituto de telecomunicações

II International Conference on Applications of Optics and Photonics

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Sociedade Portuguesa para a Investigação e Desenvolvimento em Óptica e Fotónica

2nd International Conference on Applications of Optics and Photonics, AOP 2014
May 26 to 30, 2014
Hotel Mélia Ria, Aveiro, Portugal

Conference General Chair

Manuel Filipe P. C. M. Costa (University of Minho, Portugal)

Conference Chair

Rogério Nunes Nogueira (Instituto de Telecomunicações, Aveiro, Portugal)

ORGANIZATION

Sociedade Portuguesa para a Investigação e Desenvolvimento em Óptica e Fotónica
http://www.optica.pt/

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OSA University of Aveiro Student Chapter
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SPIE Cooperating Organization
http://www.spie.org/

ICO Cosponsored Meeting

INTERNATIONAL COMMISSION FOR OPTICS
COMMISSION INTERNATIONALE d'OPTIQUE

http://www.ico-optics.org

15. **Metameric colors in restoration**
    A. Hrib, R. Stanculescu Patru, D. Dorohoi
16. **Photoelectrochemical solar cells based on conducting polymers, single wall carbon nanotube and fullerene**
    L. P. Almeida, A. R. Prado, M. G. de Freitas, M. N. Ribeiro, M. J. Pontes, A. F. Nogueira
17. **Fill-factor and performance optimization in bulk-heterojunction organic solar cells**
    L. R. Pereira, A. J. Trindade, M. G. Santos, J. Gomes
18. **Influence of a bleaching post-exposure treatment in the performance of H-PDLC devices with high electrical conductivity**
    M. Ortuño, A. Marquez, S. Gallego, R. Fernandez, V. Navarro-Fuster, A. Belendez, I. Pascual
19. **Polymethylmethacrylate (PMMA) doped with trivalent europium ions (Eu^{3+}) with luminescente features aimed at polymeric optical fibers (POF)**
    A. S. Borges, S. T. Leite, A. F. Neto, M. J. Pontes, M. R. Ribeiro
20. **Studies of the Yb^{3+}, Er^{3+} doping on the glass transition and crystallization kinetic promised for photovoltaic application TeO_2 based glasses**
    P. Prezas, M. Graça, M. Valente, P. Bragiel, M. Piasecki, J. Dlugosz
21. **Effect of Yb^{3+}, Er^{3+}, Pr^{3+} and Tm^{3+} doping on the third-order nonlinear optical properties of BLFT glasses measured by Z scan**
    M. R., J. Dlugosz, S. Jakka, G. M. P. F., S. M. J., V. M. A., P. M.
22. **Exploration of electrical signal addressing parameters in digital phase-only LCoS devices**
    F. J. Martínez, A. Márquez, S. Gallego, M. Ortuño, J. Francés, A. Beléndez, I. Pascual

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Friday, 30 May

9:00 - 9:45
Plenary session VI

Room S. Pedro II
Chair: John Barrera-Ramírez, Universidad de Antioquia (Colombia)

Rarefaction pulses and coherent cavitation in liquid light beams
Humberto Michinel, A. Paredes, D. Feijoo
Universidad de Vigo (Spain)

9:45 - 10:45
Parallel sessions

Fr1.a • Room S. Pedro II
Chair: Lutz Rapp, Coriant (Germany)

On the impact of fiber-delay-lines (FDL) in an all-optical network (AON) bottleneck without wavelength conversion (*Invited*)
P. Argibay-Losada, Gokhan Sahin
Instituto de Telecomunicações (Portugal)

Energy-aware RWA for IP transport over WDM networks
Miguel Henriques, P. Pinho, A. Teixeira
Instituto Superior de Engenharia de Lisboa (Portugal)

Efficiency analysis on platform over the top (OTT) to deploy content and applications (edutainment) in digital television, on optical network link
William S. Puche, J. E. Sierra, G. A. Moreno
Institución Universitaria Politécnico Colombiano Jaime Isaza Cadavid (Colombia)

Fr1.b • Room S. João
Chair: Ana Maria Rocha, Instituto de Telecomunicações, Portugal

Solid to liquid light: Soliton dynamics using GPU computing (*Invited*)
Ariel R. Guerreiro, N. A. Silva
Universidade do Porto and INESC Porto (Portugal)

Optical response of fractal aggregates of polarizable particles
R. Pereira, J. Borges, P. Pereira, G. V. Smirnov, F. Vaz, A. Cavaleiro, Mikhail I. Vasilevskiy
Universidade do Minho (Portugal)

Attenuation in left-handed waveguide structure using equivalent current theory method
H. M. Musa, Mohammad M. Shabat
Islamic University of Gaza (Occupied Palestinian Territory)

22. Exploration of electrical signal addressing parameters in digital phase-only LCoS devices

Paper: AOP100-58

Author(s): Francisco J. Martínez, Andrés Márquez, Sergi Gallego, Manuel Ortuño, Jorge Francés, Augusto Beléndez, Inmaculada Pascual, Univ. de Alicante (Spain)

Digitally addressed parallel aligned liquid crystal on silicon displays (PA-LCoS) have found wide acceptance in applications requiring phase-only modulation. Much attention has been given in the literature to the phase flicker they may exhibit produced by the pulse width modulated signal (PWM) used to addressed the image to the device. However there are a number of parameters which may affect the optical modulation capabilities of these digital devices and which may be used to enhance their performance in applications. In this work we show how these parameters, such as voltage range or sequence format may be used to produce the necessary dynamic ranges to generate specific modulation regimes useful in applications such as diffractive optics. To this goal we apply calibration techniques developed in our lab, basically the classical linear polarimeter extended to take into account the existence of flicker, which enables to measure both the linear retardance and its fluctuation amplitude in PA-LCoS devices. Experimental results will be provided showing the usefulness of the approach to LCoS users interested in optimizing their performance in applications.