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RAPIDO

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Crystalline oxidized InSb(100)(1  $\times$  2)-O

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Novel optical and photonic devices based on 2D materials

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Computation of torque of an electrical machine with different types of finite element mesh in the air gap

Dynamics of photovoltaic-generator-interfacing voltage-controlled buck power stage

Analytical computation of the demagnetizing energy of thin-film domain walls

Single KTiOPO<sub>4</sub> nanocrystals for nonlinear probing of local optical fields and interaction with a metallic nanostructure

Real-time depth image-based rendering with layered dis-occlusion compensation and aliasing-free composition

Thermal, structural and optical properties of  $\text{Er}^{3+}$  doped phosphate glasses containing silver nanoparticles

Near-infrared photodetectors in evaporated ge  
Characterization and TCAD simulations

Germanium-on-glass solar cells  
Fabrication and characterization

Thermally evaporated single-crystal Germanium on Silicon

Low-temperature germanium thin films on silicon

Micro-Raman characterization of Germanium thin films evaporated on various substrates

Thermal evaporation of Ge on Si for near infrared detectors  
Material and device characterization

Open Material Property Library With Native Simulation Tool Integrations - MASTO

Dynamic speckle analysis with smoothed intensity-based activity maps

Dynamic laser speckle metrology with binarization of speckle patterns

Stimuli-Responsive Materials Based on Interpenetrating Polymer Liquid Crystal Hydrogels

Optical and topographic changes in water-responsive patterned cholesteric liquid crystalline polymer coatings

An Optical Sensor for Volatile Amines Based on an Inkjet-Printed, Hydrogen-Bonded, Cholesteric Liquid Crystalline Film

Stimuli-responsive photonic polymer coatings

Inkjet-printed dual microfluidic-based sensor integrated system

Residual stress development in cold sprayed Al, Cu and Ti coatings

Screen-Printed Stretchable Interconnects

Preserving natural scene lighting by strobe-lit video

Structure and in vitro dissolution of Mg and Sr containing borosilicate bioactive glasses for bone tissue engineering

ESD qualification data used as the basis for building electrostatic discharge protected areas

Progress on HL-LHC  $\text{Nb}_3\text{Sn}$  Magnets

Hematite Surface Modification toward Efficient Sunlight-Driven Water Splitting Activity  
The Role of Gold Nanoparticle Addition

Sub-parts-per-trillion sensitivity in trace gas detection by cantilever-enhanced photo-acoustic spectroscopy

The 16 T Dipole Development Program for FCC

Magnetic and mechanical design of a 16 T common coil dipole for FCC

Restoring Integral Images from Focal Stacks Using Compressed Sensing Techniques

Screen printed temporary tattoos for skin-mounted electronics

Backscattering-based wireless communication and power transfer to small biomedical implants

State of polarization in anisotropic tapered fiber with extremely large core diameter

Transverse structure optimization of laterally-coupled ridge waveguide DFB lasers

Continuous-wave optical parametric oscillators for mid-infrared spectroscopy

Perfect magnetic mirror and simple perfect absorber in the visible spectrum

Fluorimetric oxygen sensor with an efficient optical read-out for in vitro cell models

Diffusion on aluminum-cluster surfaces and the cluster growth

Simulation of cluster growth using a lattice gas model

Instability of cuboctahedral copper clusters

Theoretical studies of structural properties of the high- $T_c$  superconductor  $Y_1Ba_2Cu_3O_{7-x}$

Towards REBCO 20T+ Dipoles for Accelerators

A Fast Quench Protection System for High-Temperature Superconducting Magnets

Photoinduced surface patterning of azobenzene-containing supramolecular dendrons, dendrimers and dendronized polymers

Relaxation behavior of densified sodium aluminoborate glass

Near-surface defect profiling with slow positrons  
Argon-sputtered Al(110)

Processor core for 32 kbit/s G.726 ADPCM codecs

Realization of Free-Space Long-Distance Self-Healing Bessel Beams

Comparison of three light doses in the photodynamic treatment of actinic keratosis using mathematical modeling

High-power 1550 nm tapered DBR lasers fabricated using soft UV-nanoimprint lithography

1180 nm GaInNAs quantum well based high power DBR laser diodes

1.3 $\mu$ m U-bend traveling wave SOA devices for high efficiency coupling to silicon photonics

Physisorption of benzene on a tin dioxide surface  
Van der Waals interaction

Cysteine-tagged chimeric avidin forms high binding capacity layers directly on gold

Detection of 3,4-methylenedioxymethamphetamine (MDMA, ecstasy) by displacement of antibodies

Noise measurements from reconstructed digital breast tomosynthesis

Photoinduced Electron Transfer in CdSe/ZnS Quantum Dot-Fullerene Hybrids

Photoinduced Electron Injection from Zinc Phthalocyanines into Zinc Oxide Nanorods  
Aggregation Effects

Simulation studies of DFB laser longitudinal structures for narrow linewidth emission

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Narrow-linewidth 780 nm DFB lasers fabricated using nanoimprint lithography

No-reference visual quality assessment for image inpainting

Depth map occlusion filling and scene reconstruction using modified exemplar-based inpainting

Action recognition using the 3D dense microblock difference

Determination of beam incidence conditions based on the analysis of laser interference patterns

SESAM mode-locked Tm  
CALGO laser at 2  $\mu$ m

Symmetry-broken electronic structure and uniaxial Fermi surface nesting of untwinned CaFe<sub>2</sub>As<sub>2</sub>

Adsorption and dissociation of molecular oxygen on  $\alpha$ -Pu (0 2 0) surface  
A density functional study

Sub-10 optical-cycle mode-locked Tm:(Lu<sub>2</sub>/3Sc<sub>1</sub>/3)2O<sub>3</sub> mixed ceramic laser at 2057 nm

73-fs SESAM mode-locked Tm,Ho:CNGG laser at 2061 nm

Programming Photoresponse in Liquid Crystal Polymer Actuators with Laser Projector

Light propagation analysis in nervous tissue for wireless optogenetic nanonetworks

Temporal ghost imaging using wavelength conversion and two-color detection

Switchable unidirectional second-harmonic emission through GaAs nanoantennas

Fluorescence bandwidth of 280nm from broadband Ce<sup>3+</sup>-doped silica fiber pumped with blue laser diode

405-nm pumped Ce<sup>3+</sup>-doped silica fiber for broadband fluorescence from cyan to red

Measuring bend losses in large-mode-area fibers

Mode coupling in few-mode large-mode-area fibers

Design and simulation of a slotted patch antenna sensor for wireless strain sensing

Thermal effects on a passive wireless antenna sensor for strain and crack sensing

Thickness variation study of RFID-based folded patch antennas for strain sensing

Plasmon lifetime enhancement in a bright-dark mode coupled system

Benchmarking of several disparity estimation algorithms for light field processing

Strong localization in unintentional disordered photonics crystal waveguides

Mechanical behavior of a 16 T FCC dipole magnet during a quench

Mechanical stress analysis during a quench in CLIQ protected 16 T dipole magnets designed for the future circular collider

Sub-100 fs pulse generation from a Tm,Ho  
CALYO laser mode-locked by a GaSb-based SESAM at ~2043 nm

Analytical and Numerical Methods to Estimate the Effective Mechanical Properties of Rutherford Cables

Fabrication and characterization of broadband superluminescent diodes for 2 μm wavelength

High performance GaSb superluminescent diodes for tunable light source at 2 μm and 2.55 μm

Generation of bound states of pulses in a soliton laser with complex relaxation of a saturable absorber

Generation of a broad IR spectrum and N-soliton compression in a longitudinally inhomogeneous dispersion-shifted fibre

Frequency modulation of semiconductor disk laser pulses