

Integrating III-V, Si, and polymer waveguides for optical interconnects  
RAPIDO

Frequency Comb Generation in a Continuous-Wave Pumped Second-Order Nonlinear Waveguide Resonator

Adaptive multiresolution method for MAP reconstruction in electron tomography

Surface topography studied by off-axis digital holography

Finite element method incorporating coupled magneto-elastic model for magneto-mechanical energy harvester

Composition dependent growth dynamics in molecular beam epitaxy of GaInNAs solar cells  
Julkaisun otsikon käännös: : Composition dependent growth dynamics in molecular beam epitaxy of GaInNAs solar cells

Dilute nitride triple junction solar cells for space applications  
Progress towards highest AM0 efficiency

Back Reflector with Diffractive Gratings for Light-Trapping in Thin-Film III-V Solar Cells

High-Power 1.5  $\mu\text{m}$  Tapered Distributed Bragg Reflector Laser Diodes for Eye-Safe LIDAR

Polymer stabilization enhances the orientational optical nonlinearity of oligothiophene-doped nematic liquid crystals

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Roadmap on optical rogue waves and extreme events

Soliton enhancement of spontaneous symmetry breaking

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Novel highly-efficient and misalignment insensitive wireless power transfer systems utilizing Strongly Coupled Magnetic Resonance principles

Performance enhancement of the RFID EPC Gen2 protocol by exploiting collision re-recovery

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Processing and Characterization of Bioactive Borosilicate Glasses and Scaffolds with Persistent Luminescence

Novel borosilicate bioactive scaffolds with persistent luminescence

Test Results of the LARP Nb<sub>3</sub>Sn Quadrupole HQ03a

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Influence of Bi and thermal annealing on electron effective mass and electron mobility

Power loss mechanisms in n-type modulation-doped AlGaAs/GaAsBi quantum well heterostructures

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Efficient photon upconversion at remarkably low annihilator concentrations in a liquid polymer matrix: when less is more

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Transverse deformation of a lamellar TiAl alloy at high temperature by in situ microcompression

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Single-source multibattery solar charger  
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Luminescent (Er,Ho)<sub>2</sub>O<sub>3</sub> thin films by ALD to enhance the performance of silicon solar cells

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Dilute nitride SOAs for high-speed data processing in variable temperature conditions

Bringing High-Performance GaInNAsSb/GaAs SOAs to True Data Applications

Better understanding of the role of SiO<sub>2</sub>, P<sub>2</sub>O<sub>5</sub> and Al<sub>2</sub>O<sub>3</sub> on the spectroscopic properties of Yb<sup>3+</sup> doped silica sol-gel glasses

Silver sulfide nanoclusters and the superatom model

Superatom Model for Ag-S Nanocluster with Delocalized Electrons

Geometric Structure and Chemical Ordering of Large AuCu Clusters  
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The effects of laser patterning 10CeTZP-Al<sub>2</sub>O<sub>3</sub> nanocomposite disc surfaces  
Osseous differentiation and cellular arrangement in vitro

Fundamental gaps of quantum dots on the cheap

Quantum-well Laser Emitting at 1.2 μm-1.3 μm Window Monolithically Integrated on Ge Substrate

All-fiber, high-power, picosecond Yb double clad tapered fiber amplifier

New multisoliton complex in Bi-doped fiber laser operated at 1450 nm

Optical properties of GaAs<sub>1-x</sub>Bi<sub>x</sub>/GaAs quantum well structures grown by molecular beam epitaxy on (100) and (311)B GaAs substrates

Interfacial design and structure of protein/polymer films on oxidized AlGaN surfaces

On the limit of superhydrophobicity  
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Graphene-based tunable plasmon induced transparency in gold strips

Tunable Reflection Type Plasmon Induced Transparency with Graphene

Controlling the plasmon resonance via epsilon-near-zero multilayer metamaterials

Site-controlled InAs Quantum Dots for Plasmonics

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Double-asymmetric-structure 1.5  $\mu\text{m}$  high power laser diodes

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Fabrication and performance evaluation of 3D-printed graphene passive UHF RFID tags on cardboard

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Wetting hysteresis induced by temperature changes  
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Tuneable topological domain wall states in engineered atomic chains

Dissolution behavior of the bioactive glass S53P4 when sodium is replaced by potassium, and calcium with magnesium or strontium

Multistep Bloch-line-mediated Walker breakdown in ferromagnetic strips

Nonlinear optical activity effects in complex anisotropic three-dimensional media

Investigating human skin using deep learning enhanced multiphoton microscopy

Towards efficient nonlinear plasmonic metasurfaces

Third order nonlinear optical response of TTF-based molecular corners

Photovoltaic properties of low-bandgap (0.7–0.9eV) lattice-matched GaInNAsSb solar junctions grown by molecular beam epitaxy on GaAs

Narrow Bandgap Dilute Nitride Materials for 6-junction Space Solar Cells

Measuring optical anisotropy in poly(3,4-ethylene dioxythiophene) poly(styrene sulfonate) films with added graphene

Dots-on-the-fly electron beam lithography

Vortex stabilization by means of spatial solitons in nonlocal media

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Design, fabrication, and testing of a low AC-loss conduction-cooled cryostat for magnetization loss measurement apparatus

A Two-Stage LNA Design for 28GHz Band of 5G on 45nm CMOS

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Paraxial light beams in structured anisotropic media

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Superfluid weight and Berezinskii-Kosterlitz-Thouless transition temperature of twisted bilayer graphene

Broadband finite-Difference Time-Domain modeling of plasmonic organic photovoltaics

MECSELs with direct emission in the 760 nm to 810 nm spectral range  
A single- and double-side pumping comparison and high-power continuous-wave operation

Double-side pumped membrane external-cavity surface-emitting laser (MECSEL) with increased efficiency emitting > 3 W in the 780 nm region

Crystallization processes in the phase change material Ge<sub>2</sub> Sb<sub>2</sub> Te<sub>5</sub>  
Unbiased density functional/molecular dynamics simulations



Are coarse-grained models apt to detect protein thermal stability? the case of OPEP force field

Narrow-linewidth operation of folded VECSEL cavity with twist-mode configuration

Evaluation of crushing strength of spray-dried MgAl<sub>2</sub>O<sub>4</sub> granule beds

Pulsed high-power yellow-orange VECSEL

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1180nm VECSEL with 50 W output power

Molecular dynamics simulations for Xe absorbed in zeolites

Frequency-doubled VECSEL employing a Volume Bragg Grating for linewidth narrowing

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Mining tailings as raw materials for reaction-sintered aluminosilicate ceramics

Effect of mineralogical composition on microstructure and properties

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Integrated multi-wavelength mid-IR light source for gas sensing

Computational super-resolution phase retrieval from multiple phase-coded diffraction patterns

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Computational wavelength resolution for in-line lensless holography

Phase-coded diffraction patterns and wavefront group-sparsity

Multiwavelength surface contouring from phase-coded diffraction patterns

The effect of carbon and nickel additions on the precursor synthesis of Cr<sub>3</sub>C<sub>2</sub>-Ni nanopowder

Alpha radiation induced luminescence in solar blind spectral region

Fabrication of ssDNA/oligo(ethylene glycol) monolayers by promoted exchange reaction with thiol and disulfide substituents

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Precipitate formation in aluminium alloys  
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Localized surface plasmon resonance in silver nanoparticles  
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Tuning electronic properties of graphene heterostructures by amorphous-to-crystalline phase transitions

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Complex-domain sparse imaging in terahertz pulse time-domain holography with balance detection

Features of correlation measurements of the parameters of pulsed hyperspectral optical fields using an asymmetric interferometer

Direct measurement of vapour-metal shifts in photo- and Auger electron spectra of Zn and Cd

GaInAsSb/AlGa(In)AsSb type I quantum wells emitting in 3 $\mu$ m range for application in superluminescent diodes

Observation of unusual metal-semiconductor interaction and metal-induced gap states at an oxide-semiconductor interface  
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Properties of nematicons in low-birefringence nematic liquid crystals

Thermal effects on the Wigner localization and Friedel oscillations in many-electron nanowires

A Finite Element Simulation Tool for Predicting Hysteresis Losses in Superconductors Using an H-Oriented Formulation with Cohomology Basis Functions

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Linear and nonlinear light beam propagation in chiral nematic liquid crystal waveguides

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Inkjet printed single layer high-density circuitry for a MEMS device

Combination of E-jet and inkjet printing for additive fabrication of multilayer high-density RDL of silicon interposer

Statistical analysis of E-jet print parameter effects on Ag-nanoparticle ink droplet size

A novel strain sensor based on 3D printing technology and 3D antenna design

Enhanced-performance wireless conformal "smart skins" utilizing inkjet-printed carbon-nanostructures

Novel enhancement techniques for ultra-high-performance conformal wireless sensors and 'smart skins' utilizing inkjet-printed graphene

Inkjet printing of radio frequency electronics  
Design methodologies and application of novel nanotechnologies

Inkjet-printed graphene-based wireless gas sensor modules

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Preparation of water-based carbon nanotube inks and application in the inkjet printing of carbon nanotube gas sensors

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An integrated "sense-and-communicate" broad-/narrow-band optically controlled reconfigurable antenna for cognitive radio systems

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Design of a Nb<sub>3</sub>Sn 400 T/m quadrupole for the Future Circular Collider

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Effects of thinning and heating for TiO<sub>2</sub>/AlInP junctions

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Quench Protection Study of the Eurocircol 16 T cosθ Dipole for the Future Circular Collider (FCC)

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Chip-by-chip configurable interconnection using digital printing techniques

Effect of the glass melting condition on the processing of phosphate-based glass-ceramics with persistent luminescence properties

Highly-efficient Ho:KY(WO<sub>4</sub>)<sub>2</sub> thin-disk lasers at 2.06 μm

Study of second-harmonic generation from CdS nanostructured thin film

Eco-friendly flexible wireless platforms by 3D printing pen

Passive UHF RFID-based user interface on a wooden surface

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Evaluation of screen printed silver trace performance and long-term reliability against environmental stress on a low surface energy substrate

Processing of printed silver patterns on an ETFE substrate

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Comparative Analysis of Injection Microdisk Lasers Based on InGaAsN Quantum Wells and InAs/InGaAs Quantum Dots

High-resolution coded-aperture design for compressive X-ray tomography using low resolution detectors

Antenna design considerations for far field and near field wireless body-centric systems

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Geometry Analysis in Screen-Printed Stretchable Interconnects

Improvements in the electromechanical properties of stretchable interconnects by locally tuning the stiffness

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Mechanical Effects of the Nonuniform Current Distribution on HTS Coils for Accelerators Wound With REBCO Roebel Cable

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Sensitivity Analysis of Inverse Thermal Modeling to Determine Power Losses in Electrical Machines

A novel 3-D printed loop antenna using flexible NinjaFlex material for wearable and IoT applications

AlGaAs/AlGaInP VECSELs with Direct Emission at 740-770 nm

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Sub-100 ps monolithic diamond Raman laser emitting at 573 nm

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Ultra-large mode area single frequency anisotropic MOPA with double clad Yb-doped tapered fiber

Phosphate glasses with blue persistent luminescence prepared using the direct doping method

Influence of the phosphate glass melt on the corrosion of functional particles occurring during the preparation of glass-ceramics

Effect of heat-treatment on the upconversion of  $\text{NaYF}_4:\text{Yb}^{3+}, \text{Er}^{3+}$  nanocrystals containing silver phosphate glass

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Self-orienting liquid crystal doped with polymer-azo-dye complex

Labyrinth based left-handed metamaterials and sub-wavelength focusing of electromagnetic waves

Physics and applications of photonic crystals

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High performance corrosion resistant coatings by novel coaxial cold- and hot-wire laser cladding methods

Modification of Surface States of Hematite-Based Photoanodes by Submonolayer of  $\text{TiO}_2$  for Enhanced Solar Water Splitting

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Effects of insertion of strain-engineering Ga(In)NAs layers on optical properties of InAs/GaAs quantum dots for high-efficiency solar cells

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Walking anisotropic spatial solitons and their steering in nematic liquid crystals

Directional random laser by combining cavity-less lasing and spatial solitons in liquid crystals

Absorption profile and femtosecond intraband relaxation of the intense upper Davydov component in oligothiophenes

Novel Er<sup>3+</sup> doped phosphate glass-ceramics for photonics

A membrane external-cavity surface-emitting laser (MECSEL) with emission around 825 nm

Bistable optical propagation in nematic liquid crystals

Nonlocal soliton scattering in random potentials

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Decreasing the extremely low-frequency electric field exposure with a Faraday cage during work tasks from a man hoist at a 400 kV substation

Influence of As/group-III flux ratio on defects formation and photovoltaic performance of GaInNAs solar cells

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Exciton localization and structural disorder of GaAs<sub>1-x</sub>Bi<sub>x</sub>/GaAs quantum wells grown by molecular beam epitaxy on (311)B GaAs substrates

Halogen bonding versus hydrogen bonding in driving self-assembly and performance of light-responsive supramolecular polymers

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Halogen bonding stabilizes a cis-azobenzene derivative in the solid state  
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The Impact of Protection Heater Delays Distribution on the Hotspot Temperature in a High-Field Accelerator Magnet

Suitability of Different Quench Protection Methods for a 16 T Block-Type Nb<sub>3</sub>Sn Accelerator Dipole Magnet

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A hand-held immaterial volumetric display

Multicolor nonlinear pulse compression by consecutive optical parametric amplification in quasi-phase matched structures

A study of electric transport in n- and p-type modulation-doped GaInNAs/GaAs quantum well structures under a high electric field

Tailoring directional scattering of second-harmonic generation from (111)-GaAs nanoantennas

Considerations on a Cost Model for High-Field Dipole Arc Magnets for FCC

The effects of I/Q imbalance on wireless communications

A survey

Piezoresistive natural rubber-multiwall carbon nanotube nanocomposite for sensor applications

Effect of incorporation of CdS NPs on performance of PTB7 PCBM organic solar cells

Hyperspectral phase imaging based on denoising in complex-valued eigensubspace

Photoinduced bending upon pulsed irradiation in azobenzene-containing crosslinked liquid-crystalline polymers

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 Er<sup>3+</sup> 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 Nb<sub>3</sub>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

Julkaisun otsikon käännös: : 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  $\mu\text{m}$

Symmetry-broken electronic structure and uniaxial Fermi surface nesting of untwinned  $\text{CaFe}_2\text{As}_2$

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

Sub-10 optical-cycle mode-locked Tm:(Lu<sub>2</sub>/3Sc<sub>1</sub>/3)<sub>2</sub>O<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  $\text{Ce}^{3+}$ -doped silica fiber pumped with blue laser diode

405-nm pumped  $\text{Ce}^{3+}$ -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  $\mu\text{m}$  wavelength

High performance GaSb superluminescent diodes for tunable light source at 2  $\mu\text{m}$  and 2.55  $\mu\text{m}$

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