Winter College on Optics: Theoretical and Applied Aspects of Metamaterials and Metasurfaces | (SMR 4058)

24 Feb 2025 - 07 Mar 2025
ICTP, Trieste, Italy

P01 - ABIRI Cyrus Anuri

Engineering light matter interaction through planar metamaterials to generate complex quantum states.Light-matter interactions through planar metamaterials offer a fascinating avenue for generating complex quantum states. These metamaterials, engineered structures designed to manipulate electromagnetic waves, can significantly alter how light interacts with matter at the quantum level. When light interacts with planar

P02 - AKBARI Mahmood

Nonlinear optical properties of natural tomato lycopene and some other novel chiral molecules

P03 - ALIGHOLAMI Meisam

Laser-assisted thermally enhanced Cu grafted graphene-based nanofluid for solar thermal system

P04 - BOJAN Eleonora Mihaela

Terahertz spectroscopy measurements for characterization of some hydrogels and polymers

P05 - CHATTERJEE Ankur

Thermoelectric transport properties estimation for thin film superlattice via novel technique for Seebeck coefficient analysis

P06 - CHHILLER Nishant

Metamaterial based digital holographic technique for surface profiling

P07 - FAKUDE Temnotfo Lihle

Enhanced thermal conductivity of Boron Carbide-Ethylene Glycol nanofluids by pulsed laser ablation in liquid.

P08 - FARZAMRAD Vahideh

Quantitative differentiation of blood-mimicking phantoms via dynamic laser speckle analysis

P09 - GICHURU Rodgers Mutugi

Impact of meta-optics on medical imaging in developing nations

P10 - IONEL Laura Emilia

Characterising Spatio-Temporal Coupling of Tightly Focused Femtosecond Laser Pulses in Micro-Structured Dispersive Materials

P11 - JAVED Isma

Design and Development of Device to System Level Advanced Optics for Futuristic Microscopy

P12 - MADUMA Dikeledi Cynthia

Synthesis and Characterization of Boron Carbide Nanoparticles using the Pulsed laser Ablation in liquid for Boron Neutron Capture therapy.

P13 - MIKAEELI Ameneh

Thermal conductivity in PEDOT:PSS thin films

P14 - MOHAMED Mahmoud Abdelhamid Ahmed

Nanoparticle Enhanced Laser-Induced Breakdown Spectroscopy (NELIBS): Basic Principles and Applications

P15 - MORADI Mehdi

A Multiphysics Design of Axial Flux Machine using Additive Manufacturing Metamaterials

P16 - MORAD Razieh

Computational Modeling of Thermochromic Behavior in Multilayered Vanadium Oxide Systems for Enhanced Solar Heat Management

P17 - MWENZE Nancy Mwikali

The size-dependent plasmonic effects of silver nanoparticles in Surface-Enhanced Raman Spectroscopy

P18 - NEMATALLAH Omnia Hamdy Abdelrahman

Developing a Highly Sensitive Multi-Band Terahertz Metamaterial Biosensors for virus detection

P19 - NEMUKULA Enos

Investigation of Pd-Ti and Ni-Ti Multilayer Thin Films for enhanced hydrogen storage capacity

P20 - PELEMIS Svetlana

Enhancing water remediation efficiency through plasmonic metamaterials: a sustainable approach to photocatalytic degradation

P21 - SHAFIEI KHOSROSHAHI Shiva

Enhancing Ice Nucleation through Laser-Induced Nano-sized Particles: Exploring Laser-Solid Interaction Dynamics

P22 - SHAMSKHAMENEH Aylar

Engineered Cu2S Nanostructures as Optically Functional Metamaterials for Targeted Heavy Metal and Dye Removal in Water Treatment

P23 - SHARMA Parul

Exploring Exceptional Points Using Gold Metasurfaces

P24 - TCHINDA NGOUNOU Erna Leticia

Enhanced Third-order Nonlinearity in Lycopene Bio-conjugated Ag Nanoparticles

P25 - TOPUZOSKI Suzana

Transformation of Laguerre-Gaussian beam of mode (l,n=0) in the process of Fresnel diffraction by the helical lens

P26 - TOSA Nicoleta Ioana

Laser-assisted Synthesis for Metamaterials The aim of this communication is to synthesize metallic micro-and nanostructures by direct laser writing (DLW) using a photochemical approach in a dual system to generate metamaterials type patterns. The chemical system is based on metallic doped matrix following the line of green chemistry at room-temperature.

P27 - VASWANI Lavi Kumar

Electromagnetically Induced Transparency in Terahertz Metamaterials

P28 - VEGA ZULETA Lucio Rodrigo

Characterization by differential thermal lens spectroscopy of graphene oxide membranes in water remediation processes.

P29 - WALIA Keshav

Theoretical investigation of nonlinear Light-matter Interactions through metasurfaces

P30 - YAQOTI Humaira

Integral Imaging of 3D structures near Interfaces

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