



Poster Programme

Poster Session 1

P01 Beyond 3 Terahertz surface nonlinear emission limits
Juan Sebastian Toterogongora, University of Sussex, UK

P02 The role of leaky-waves in high-performance extraordinary THz transmission quasi-optical filters
Miguel Navarro-Cia, University of Birmingham, UK

P03 Hyperspectral Terahertz microscopy with nonlinear ghost imaging
Luana Olivieri, University of Sussex, UK

P04 WITHDRAWN

P05 Intense broadband multi-terahertz pulses of 280 MV/cm for gaseous medium nonlinearity
Ya Bai, Chinese Academy of Sciences, China

P09 Photonic Hilbert transformer based on phase-modulated fiber Bragg grating in transmission
Xin Liu, Aston University, UK

P10 Numerical simulations of speckle to extract surface roughness parameters from random rough surface scattering
Amrit Lotay, Durham University, UK

P11 Investigation of low-index waveguiding in inverse rod-connected diamond photonic crystals
Mike Taverne, University of Bristol, UK

P12 Indirect- to direct-gap transitions in Ge(C,Sn) group-IV semiconductor alloys: mechanisms and implications
Christopher Broderick, University College Cork, Ireland

P13 Scattering of waves by pre-fractal Cantor-set apertures: nonparaxial formulation and numerical analysis
Holly Middleton-Spencer, University of Salford, UK

P14 On generalizing the knife-edge problem for fractal waves: the Weierstrass-Lamb solution
James Christian, University of Salford, UK

P16 Singlet oxygen luminescence dosimetry with a fiber-coupled superconducting nanowire single-photon detector
Konstantinos Tsimvraakis, University of Glasgow, UK

P17 Measurement of blood oxygenation in nailfold capillaries; a feasibility study in patients with systemic sclerosis and healthy controls
Andrea Murray, The University of Manchester, UK

P18 The OPTA device: A novel miniature optical probe to evaluate tissue atrophy
Amrit Lotay, Durham University, UK

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P20 A concept of pixellated optics for low vision aids: Telescope Windows
Cyril Bourgenot, Durham University, UK

P21 Imaging ellipsometry as a novel detection method for protein-protein interactions
John Tomes, Aberystwyth University, UK

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P27 Structure and optical properties of Er³⁺-doped gallium lanthanum sulfide (GLS) thin films prepared by femtosecond pulsed laser deposition
Kheir Albarkaty, University of Leeds, UK

P37 Modulational instability and soliton dynamics in Lithium Niobate nano-waveguides
William Rowe, University of Bath, UK

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P40 Nonlinear fourier transform analysis of a mode-locked fibre laser
Morteza Kamalian Kopae, Aston University, UK

P41 Nonlinear regimes governed by parametric interaction in micro-cavities
Luigi Di Lauro, University of Sussex, UK

P42 Giant multiphoton absorption for THz resonances in silicon hydrogenic donors
Nguyen Le, University of Surrey, UK

P43 Light-sheet microscopy beam path miniaturisation using optical MEMS
Spyridon Bakas, University of Strathclyde, UK

P48 Developments in low cost laser detection
Marie Zandi, Aston University, UK



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- P49 Limits on Mueller-polarimeter errors using the eigenvalue calibration method**
Neil Bruce, Universidad Nacional Autonoma de México, Mexico
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- P50 Investigation into the effects of direct radiation interactions in a detector's PMT**
Ali McLean, AWE, UK
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- P54 3D-printed double lenslet array for wide-angle static concentrating photovoltaics**
Rakan Edrees M Alsaigh, University of Glasgow, UK
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- P55 Mitigation of noise-induced corruptions for nonlinear Fourier-based optical transmission methods**
Maryna Pankratova, Aston University, UK
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- P56 The loglog growth of channel capacity for nondispersive nonlinear optical fiber channel in intermediate power range. Extension of the model**
Ivan Terekhov, Novosibirsk State University, Russia
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- P57 Single photon counting receivers for visible light communications**
Steve Collins, University of Oxford, UK
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- P58 Low cost camera based laser detection**
Sean Tipper, DSTL, UK
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- P60 Low loss dielectric mirrors for cavity based single photon emission**
Najwa Sidqi, Helia Photonics/Heriot-Watt University, UK
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- P66 Evaluating the Propagator in Quantum field Theory**
Lucky Ucho, College of Education, Ekiadolor-Benin, Nigeria
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- P71 Design and fabrication of versatile optical cavities for quantum networks**
Benjamin Yuen, University of Oxford, UK
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- P72 Excimer laser nano-structuring of SU-8 using silica micro-spheres**
Qassim Al-jarwany, University of Hull, UK
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- P75 Sintering different concentrations of iron doped calcium phosphate biomaterials using femtosecond laser for tissue engineering**
Emaan Alsubhe, University of Leeds, UK
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- P76 Simulation and observation of the Talbot effect in cylindrical symmetry based on the orbital angular momentum**
Nourah Al muhawish, University of Glasgow, UK
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- P77 Broad-band impulsive vibrational spectroscopy to detect raman signal of molecules at time domain**
Chunyong Li, Durham University, UK

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- P06 A low cost open source pressure myograph system**
Penelope Lawton, Durham University, UK
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- P07 WITHDRAWN**
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- P08 Auto-phase-locked time-gated luminescence microscope for background-free upconversion biological imaging**
Zece Zhu, Huazhong University of Science and Technology, China
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- P15 Simple model of self-phase modulation spectral patterns in optical fibres**
Sonia Boscolo, Aston University, UK
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- P23 Unexpected constitutive properties in electromagnetism and metamaterials**
Paul Kinsler, Lancaster University, UK
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- P24 Shaping longitudinal electric field profiles using wire metamaterials**
Taylor Boyd, Lancaster University, UK
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- P25 Resonant state expansion generalised to magnetic, chiral, and bi-anisotropic open optical systems and metamaterials**
Egor Muljarov, Cardiff University, UK
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- P26 The multiphysics solution to Maxwell-Hydrodynamic Equations for modeling Terahertz generation from plasmonic metasurfaces**
Wei E I Sha, University College London, UK
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- P28 Three dimensional (3D) photonic crystal composites with high refractive index thin films**
Daniel Ho, University of Bristol, UK
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- P29 Towards a full 3D photonic bandgap structure in the near infrared region via back-filling of polymer templates**
Daniel Ying-Long Ho, University of Bristol, UK
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- P30 Direct laser ablation based diffractive polymer surface**
Jean-Michel Romano, University of Birmingham, UK
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- P31 Bio-inspired microstructures for surface functionality applications**
Jean-Michel Romano, University of Birmingham, UK
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- P32 The coherent random lasing based on PM597 laser dye doped-azobenzene polymer vesicles**
Zhijia Hu, Hefei University of Technology, China
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- P33 Quantitative correlative light-electron microscopy of single plasmonic nanoparticles**
Paola Borri and Wolfgang Langbein, Cardiff University, UK



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- P34** **WITHDRAWN**
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- P44** **Calibration phantoms for optical coherence tomography**
Yang Lu, Aston University, UK
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- P45** **Passive broadband polarimeter based on a Fresnel cone**
Ryan Hawley, University of Glasgow, UK
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- P46** **Micro-Scale Optical Profilometry with Fiber Optic Lloyd's Mirror**
Gülşen Kösoğlu, Marmara University, Turkey
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- P47** **Measurement of optical cross-talk in time domain multiplexed derivative sensing techniques**
Jolyon M De Freitas, UK
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- P51** **Optomechanical self-structuring of a Bose-Einstein Condensate**
Gordon Robb, University of Strathclyde, UK
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- P52** **Optomechanical self-structuring instabilities involving orbital angular momentum**
Giuseppe Baio, University of Strathclyde, UK
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- P53** **Development & field testing of an automated portable optomechanical accelerometer**
Ying Lia Li, University College London, UK
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- P59** **Lindblad dynamics of quantum walkers in optical lattices**
Bradley Longstaff, Imperial College London, UK
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- P61** **Nano-cathodoluminescence and Carrier Dynamics in All-inorganic Perovskite Nanocrystals**
Ruben Ahumada-Lazo, The University of Manchester, UK
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- P62** **WITHDRAWN**
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- P63** **Ultrasensitive Time and Spectrally-Resolved Microscopy of Single Multiple Quantum Well Nanowire Lasers**
Stefan Skalsky, The University of Manchester, UK
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- P64** **Molecular single photon sources**
Ross C Schofield, Imperial College London, UK
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- P65** **Luminescent carbon nanodots directly grown on Si-based substrates by chemical vapor deposition**
Rui Huang, Hanshan Normal University, China
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- P67** **A new explanation for the color variety of photons**
Mohammadjavad Faraji, Saleh Research Centre, Iran
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- P68** **Entanglement indicators for arbitrary number of modes optical fields**
Bianka Woloncewicz, University of Gdansk, Poland
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- P69** **Nonlocal coherent perfect absorption**
John Jeffers, University of Strathclyde, UK
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- P73** **Optimisation and quality control of optical trapping in bespoke hydrogels**
Jenna James, The University of Nottingham, UK
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- P74** **Levitated electromechanics**
James Millen, King's College London, UK
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- P78** **High resolution SAW elastography for ex-vivo porcine skin specimen**
Kairui Feng, University of Dundee, UK
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- P79** **Optical fibre sensing of pH, temperature, turbidity and chemical species for nuclear industry applications**
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- P80** **A fibre-tip Fabry-Pérot cavity for deterministic, strong atom-photon interactions**
Naomi Holland, University of Oxford, UK
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- P81** **Controlled-phase manipulation module for orbital-angular-momentum photon states**
Zheng-Fu Han, University of Science and Technology of China, China
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- P82** **WITHDRAWN**
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- P83** **A zonal wavefront sensor with improved centroid detection accuracy**
Biswajit Pathak, University of Oxford, UK



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Advances in THz technology

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Computational photonics

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Medical applications of light

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Mid-IR photonics

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Nonlinear photonics

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Novel and super-resolution microscopy

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Optical and quantum metrology

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Quantum coherent control

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Quantum communication

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Quantum dots, nanocrystals, and low dimensional materials

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Quantum information

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Quantum optics

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Trapping and manipulation

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Ultrafast optics

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Topological photonics

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Active and adaptive optics

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