



**INTERNATIONAL CONFERENCE ON RECENT TRENDS IN PHOTONICS
(NPS-21)**

**International School of Photonics
Cochin University of Science and Technology**



Program Schedule

Day 1 (27/02/2021)

Time	Title of the talk	Speaker	Session Chair
9:00 AM	Inaugural Ceremony		
9:30 AM – 10:30 AM	Keynote address "Structured Photons – Their Application in Quantum Photonics".	Prof. Ebrahim Karimi	Prof. Pramod Gopinath
11:00 AM – 12:45 PM	Contributed talks		Dr. C S Praveen
OP1	Effect of Fuel Concentration on Properties of NiO/Ni Nanocomposites: A Photocatalytic Degradation Study of Methylene Blue	Drishya M	
OP2	THICKNESS DEPENDENT BAND GAP OF ZnO DEPOSITED On Si/La0.7Sr0.3MnO3 heterostructures	Bibekananda Das	
OP3	Effect of Monomer on optical and electrical properties of Liquid Crystal systems	Dr. Santosh Mani	
OP4	Flexible All-Polymer Nonlinear Bragg Reflectors for Improving the Optical Nonlinearity of 5,15-di(pyridyl)-10,20-bis(Pentafluorophenyl)Porphyrin	Vijisha M V	
OP5	Temperature Dependent Luminescence Study on CMS: Eu Phosphor	Navya Sara Kuriyan	
OP6	Development of Spectral Analysis Software for LIBS Applications.	Balakrishna Prabhu B N	
2:00 PM	Invited Lecture		Dr. Saji K J
	"2D nanomaterials based next generation photodetectors."	Dr. Pravin Walke	

3:00 PM - 3:45 PM	Poster Session 1		
PP1	Fabrication of forming-free Al/ZnO/Al memristors and investigation of resistive switching mechanism.	Praveen P	
PP2	Review of MoS ₂ based Memristors to analyse its Function as an Artificial Synapse	Chandhni Chandran	
PP3	A review of two dimensional MoS ₂ transistor for mimicking biological synaptic functions	Sneha P	

PP4	Fast Imaging study of lateral and orthogonal collision of laser produced aluminium plasmas	Shilpa S	
PP5	MgF ₂ /ZnS based one dimensional photonic crystal for cancer cell detection	Karthika Sankar	
PP6	Optical Studies on Solution Processed GeGaSe Chalcogenide Glass in Amine Solutions	Soumya S	
PP7	Effect of effusion temperature in the deposition of two dimensional MoS ₂ by radio frequency magnetron sputtering	Cicily Rigi V J	
PP8	Transmission properties of hyperbolic metamaterial based on Silver – Silica metal – dielectric multilayer structure	Ahmed Lafeef E N	
PP9	Laser produced brass plasma in air and argon: a focus on electron number density and electron temperature	Divya D Pai	
PP10	Structural and photoluminescent properties of Eu ³⁺ doped Na ₆ CaP ₂ O ₉ phosphors for orange red light emitting applications	Krishnapriya T	
PP11	Investigating Magneto-optic Faraday rotation of CoFe ₂ O ₄ -Au colloidal mixture	Lakshmi B	
PP12	Studies on Spatial Self Phase Modulation of Pyrromethene 567 Dye	Titu Thomas	

4:00 PM-5:30 PM	Contributed talks		Mr. KP Muhammed Rishad
OP7	Optical Limiting in Nitrochalcone Derivatives	Mary Joseph	
OP8	Photoluminescence behaviour of Sm _{2/3} Cu ₃ Ti ₄ O ₁₂ Ceramics	Jibi Kunjumon	
OP9	Detection Of Emanated Radiation From The Modified Clad Region (SnO ₂) Using Optical Fiber For Methanol Gas Sensing	S. Devendiran	
OP10	Design of low-crosstalk polarization mode splitter using zero-gap directional coupler in lithium niobate	Romala Sattibabu	
OP11	Polarization parameters of wood sample using He-Ne Laser by Ellipsometric Technique	Bobbala Jyothi	
OP12	Development of low threshold continuous wave random laser for speckle free imaging of biological cells	Ashim Pramanik	
OP13	Nonlinear optical multiphoton absorption in chemically synthesized colloidal dispersion of Au nanoclusters	Koushik Mondal	

Day 2 (28/02/2021)			
9:00 AM – 10:00 AM	Invited Lecture "Probing electronic processes with attosecond XUV pulse trains"	Prof. Arvinder Sandhu	Prof. A Mujeeb
10:30 AM – 11:30 AM	Invited Lecture "Optical Technologies for Studying Rodent Brains"	Dr. Deepa Kamath Kasaragod	Mr. K P Muhammed Rishad
Contributed talks			
OP14	Realization of All-Optical Diode Action from 1-D Nonlinear Photonic Crystal	Nikhil P P	Dr. Saji K J
OP15	Efficient Triangular Pulse Generation in Typically Designed Silicon on Insulator (SOI) Planar Waveguide	Somen Adhikary	
OP16	Estimation of the Change in Haemoglobin Concentration in Blood by Using a Silica Based Sub-wavelength Diameter Single Mode Fiber	Binoy Krishna Ghosh	
OP17	Blue luminescence in organic dye incorporated Methylammonium lead bromide quantum dots	Aruna Raj	
OP18	Design of a Coupled Resonator Optical Waveguide Filter for Photonic Integrated Circuits	Srinivasa Rao Yandrapu	
OP19	Photo-degradation performance of casein capped zinc oxide nanoflowers using laser	Manju Joseph	
Poster Session			
PP13	Single excitation dual colour lasing from dye filled hollow polymer optical fiber	Anugop B	Dr. Saji K J
PP14	Development of a SEIRA substrate from GeSeTe-Ag combo using a facile sandpaper template assisted soft lithography	Ajina C	
PP15	Improved luminescence In Rare Earth Based Inorganic Phosphors	Dr Kamal P Mani	
PP16	Tuning the width of Photonic Band Gap using dissimilar 1D Photonic crystals	Shilpa R	
PP17	Real-time Measurement of Nutrients in Food by Optical Methods	Dr Jinesh Mathew	
PP18	Design and optimisation of distributed Bragg reflectors using transfer matrix model simulations	Lisha C L	
PP19	Wavelength tuned surface plasmon resonance for high sensitivity bio-sensing applications	Resmi K R	
PP20	Crystal Structure and Optical Properties of Eu ³⁺ activated NaGdMgTeO ₆ Layered Double Perovskite for WLED Application	Sreelekshmi A K	

PP21	Diffraction studies on inwardly grown polystyrene opals	Safna Saif	
PP22	Synthesis And Characterization Of ENZ Metamaterial For Photonic Applications	Amitha M	
PP23	Unraveling the Photoluminescent Tunability in F-doped Cdots Derived from Folic Acid	Akhila Murali J	
PP24	SERS Efficiency of Star Shaped Gold Nanoparticles on Different Rigid and Flexible Platforms	Rathod Jagannath	
PP25	NIR emission and Upconversion luminescence properties of sol-gel derived LaNbO ₄ :Er ³⁺ phosphors	Remya Mohan P	
3:00 PM - 4:00 PM	National Science Day Lecture	Prof. Robert Bingham	Prof. Pramod Gopinath
	"Laser and Beam Plasma Accelerators.		
Day 3 (01/03/2021)			
9:00 AM - 10:00 AM	Invited Lecture	Dr. Hrebesh Molly Subhash	Prof. M Kailasnath
	"Photonics in Cosmetics Research & Digital Health "		
10:20 AM - 11:15 AM	Contributed talks		Prof. A Mujeeb
OP20	Microwave Propagation in One-Dimensional Magnetized Cold Plasma with Air Ternary Periodic Structure	Dr. Narendra Kumar	
OP21	Concentration dependence on thermal diffusivity of MnO ₂ nanorods dispersed in ethylene glycol using thermal lens technique	Jayaprasad K V	
OP22	Studies on effects of size, morphology and composition in Ag, Au and Ag-Au plasmonic nanoparticles	Reshma Beeram	
11:30 AM - 12:30 PM	Invited Lecture	Prof. Antonello Andreone	Dr. Priya Rose T
	"Record THz EMI shielding and its decomposition dynamics in thin graphene/PMMA nanolaminates"		
1:30 PM - 2:30 PM	Invited Lecture	Dr. Jena Jagerska	Prof. Sheenu Thomas
	"Trace gas sensing with mid-infrared photonic waveguides"		

2:40 PM	Poster Presentations		
PP26	Energy transfer from Bi ³⁺ to Pr ³⁺ in Li ₃ Gd ₃ Te ₂ O ₁₂ :xBi ³⁺ , yPr ³⁺ Phosphor: Tunable Photoluminescence for Multifunctional Applications	Anusree S.P	
PP27	Lattice Filter: Design, Fabrication, and Characterization for Photonic Integrated Circuits	Likynti Banri Tiewsoh	
PP28	Measurement of Inter-Core Crosstalk of Multicore Fiber based on Space Division Multiplexing	Balbindar Kaur	
PP29	Design of a Si-based Cross-Slot Waveguide	Himanshu Ranjan Das	
PP30	Fabrication Tolerance Mach-Zehnder Interferometer	A Sophayo	
PP31	Insights into the crystal structure and multi functional optical properties of Eu ³⁺ activated Sr ₂ CdTeO ₆ double perovskites.	Nithin J S	
PP32	Vibrationally assisted thermographic response of Sr ₂ NaMg ₂ V ₃ O ₁₂ :Eu ³⁺ phosphor: A bifunctional platform for Ratiometric thermometry and safety sign	Amrithakrishnan B	
PP33	Cyto-friendly fluorescent carbon dots from citrus lemon juice	Joyal Jain Palakulam	
PP 34	Transition metal (TM=Cu and Ni) nanoparticle anchored cellulose nanofiber composites for rapid reduction of organic pollutants in water.	Dr. Vineesh Kumar	
PP35	Chemical bath synthesis of Cadmium sulphide thin films for visible light photosensor applications	Midhun P.R	
PP36	Statistical mechanics of photon condensation in optical microcavity	Dr. Renju Rajan	
PP37	Planar biological sensor using Ge ₂₅ Se ₆₅ Sb ₁₀ Chalcogenide glass based on SEIRA effect	Anupama V	
4:00 PM	Concluding remarks		