

**INTERNATIONAL CONFERENCE ON LUMINESCENCE AND ITS
APPLICATIONS
(ICLA – 2008)**

February 13-16, 2008

Venue : NPL Auditorium

**Organized by
National Physical Laboratory, Luminescence Society of India**

PROGRAMME

13 February 2008			
Registration		8:00am-9:30am	
Inaugural Session 9:30-11:00 am			
Welcome	Director, NPL		
Inaugural	Prof. V. S. Ramamurthy President, LSI		
Keynote Address	Prof. A. T. Collins Luminescence from Diamond – Science and Applications		
Vote of Thanks	Convener		
Hi-Tea : 11:00-11:30 am			
Session 1 : Time: 11:30-1:00 pm Luminescence in Gemstones & Diamonds (I) Chairpersons : Prof. A. T. Collins Dr. M.D.Shastry	Speaker	Lecture	Title of Talk
	Bing M. Cheng	PL 11:30-12:00 noon	Photoluminescence with VUV Synchrotron Excitation
	S. M. Sharma	IT 12:00-12:30 pm	Ruby - a stress sensor
	Philip Martineau	IT 12:30-1:00 pm	Methods of luminescence tagging synthetic diamond material produced using chemical vapour deposition
Lunch & Poster Session : 1:00-3:00 pm Poster NO. P₁-P₅₄, P₇₀-P₁₀₄, P₁₂₀-P₁₃₂, P₂₀₆-P₂₀₉, P₂₃₀-P₂₄₃			
Session 2 : Time: 3:00-4:30 pm Photo and Optically Stimulated Luminescence (I) Chairpersons: Dr. Bing M. Cheng Dr. T.Mukherjee	Harish Chander	IOP 3:00-3.15 pm	Luminescence Studies at NPL: past, present and future
	Kris Driesen	IOP 3:15-3.30 pm	Vibronic coupling in IR luminescence of lanthanides olamide
	S. V. Godbole	IOP 3:30-3:45 pm	Time resolved fluorescence studies on interaction of eu(iii) with n,n,n',n'-tetraoctyl diglycolamide
	H. Hagemann	IOP 3:45-4:00 pm	Spectroscopic properties of Sm ²⁺ in PbFCl-type crystals
	J. Garcia- Sole	IOP 4:00-4:15 pm	Luminescence of rare earth ions in strontium barium niobate around the phase transition
	D. R. Mishra	IOP 4:15-4:30 pm	Determination of Photo- ionization Cross-Sections in CW-OSL Phenomenon – Theoretical and Experimental Aspects

Tea : 4:30-5:00 pm			
Session 3 : Time: 5:00-6:30 pm Luminescence Physics and Kinetics Chairpersons: Prof. R. N. Bhargava Dr. Jagtap	Amar Sinha	IT 5:00-5:30 pm	Recent Trends in X-Ray And Neutron Imaging and its Applications
	C .M. Sunta	IOP 5:30-5:45 pm	A Critical Look at Thermoluminescence Kinetics
	Shin Toyoda	IOP 5.45-6:00 pm	Paramagnetic defects in quartz as the proxies for provenance of aeolian and fluvial sediments
	Ravindra Pandey	IOP 6:00-6:15 pm	First principles study of Optical and Electronic properties of Gallium oxide
	B. N. Raja Sekhar	IOP 6:15-6:30 pm	Photoluminescence and photo absorption studies using laboratory and Indus synchrotron Sources
Time: 7-00-8-00 pm Evening Lecture Chairperson: Dr. Vikram Kumar	A. K. Singhvi	7.00-8.00 pm	Luminescence Dating: A synergistic mutualism Between Physics and Earth Sciences
Dinner			

14 February 2008			
	Speaker	Lecture	Title of the Talk
Session: 4 Time: 9:00-10:30 am Luminescence Dating Chairperson: Dr. K. S. V. Nambi Prof. A. K. Singhvi	D. I. Godfrey Smith	IT 9:00-9:30 am	The timing of the final recharge of the Nubian sandstone aquifer
	N. Porat	IOP 9:30-9:45 am	Contribution of luminescence dating to Quaternary geology in Israel
	Pradeep Srivastava	IOP 9:45-10:00 am	Geochemistry and OSL chronology of fluvial terraces in Lesser Himalaya: understanding the climate-tectonics interplay
	R. H. Biswas	IOP 10:00-10:15 am	Isothermal luminescence of meteorites and exposure ages
	R. K. Gartia	IOP 10:15-10:30 am	Luminescence Dating of Some Historical / Pre-Historical Natural Hazards of India.
Tea: 10:30-11:00 am			
Session: 5 Time: 11:00-1:00 pm Luminescence in organic materials & OLEDs	T. Kamata	IT 11:00-11:30 am	Emission site analysis of electroluminescence on the polymer LED
	Giuseppe Baldacchini	IT 11:30-12:00 noon	The Luminescent Molecule Alq3 Is A World On Its Own
	Ramachandra	IOP	Lighting for Tomorrow – White

Chairperson: Prof. K. Somaiah	Pode	12:00-12:15 pm	light emitting organic light-emitting diodes
	M.N. Kamlasanan	IOP 12:15-12 :30 pm	Tuning The Spectral Response Of Zn(Hpb) ₂ by Optimal Doping Of Dcm Dye for White Organic Light Emitting Diodes
	L. Giribabu	IOP 12:30-12:45 pm	Singlet State Properties of Tetrapyrrolic Arrays for OLED Applications
	K. Ozga	IOP 12:45-1:00 pm	Light emitting diodes based on pyrazoloquinoline derivatives
Lunch & Poster Session : 1:00-3:00 pm Poster NO. P₁-P₅₄, P₇₀-P₁₀₄, P₁₂₀-P₁₃₂, P₂₀₆-P₂₀₉, P₂₃₀-P₂₄₃			
Session: 6 Time: 3:00-4:30 pm Luminescence in Gemstones & Diamonds (II) Chairperson : Dr.Philip Martineau Dr. Shripal Desai	B. C. Bhatt	IT 3:00-3:30 pm	CaSO ₄ :RE and Co-doped Phosphors - Applications and TL process
	M. D. Sastry	IT 3:30-4:00 pm	Possibilities of Fluorescence Resonance Energy Transfer (FRET) in the photo luminescence (PL) of point defects in coloured diamonds
	H. Watanabe	IOP 4:00-4:15 pm	Cathodoluminescence from Homoepitaxial Diamond Thin Films
	Y. C. Nagar	IOP 4:15-4:30 pm	Sensitization of Thermally (TL) and Optically Stimulated Luminescence (OSL) of diamonds coloured by Electron beam irradiation: Implication for tissue equivalent dosimetry
Tea : 4:30-5:00 pm			
Session: 7 Time: 5:00-6:30 pm Nanophosphors Physics & Materials Chairperson: Prof. C.K. Jay Shankar Dr. Harish Chander	P. Goldener	IT 5:00-5:30 pm	Coherent processes in rare earth doped crystals for quantum information applications
	R. P. Rao	IT 5:30-6.00 pm	Development of Nanophosphors for Various Applications
	A. K. Tyagi	IOP 6:00-6:15 pm	Lanthanide ions doped luminescent nanoparticles: Synthesis and characterization
	D. Haranath	IOP 6:15-6:30 pm	Band gap Engineering and Doping of ZnO and ZnOS Nanocrystals
Cultural Programme 7:30 -8:30pm			
Dinner			

15 February 2008

15 February 2008			
	Speaker	Lecture	Title of the Talk
Session: 8 Time: 9:00-10:30 am Industrial Phosphors Chairperson: Dr. V. Natarajan Dr. Shivkumar	Sunil Sudhakaran	IT 9:00-9:30 am	Experimental investigations of cold cathode fluorescent lamps for display applications
	K. C. Mishra	IOP 9:30-9:45 am	Investigation of physics and chemistry of Sr6B(PO4)5:Eu2+ phosphor
	J. H. Jeong	IOP 9:45-10:00 am	Enhanced luminescence behavior of YVO4:Eu3+ phosphors by Li-doping
	S. V. Moharil	IOP 10:00-10:15 am	Discovering new phosphors
	Harish Chander	IOP 10:15-10:30 am	Development of Plasma Display Phosphors at National Physical Laboratory, New Delhi, India.
Tea: 10:30-11:00 am			
Session: 9 Time: 11:00-1:00pm Radiation effects & Dosimetry Chairperson: Dr. D. N. Sharma Dr. K.V.R.Murthy	Georges Boulon	IT 11:00-11:45 am	The Optimization of the Laser Gain in Yb3+-Doped Cubic Oxide and Fluoride Crystals of 4N purity to Prospect Laser Ceramics
	T. K. Gundu Rao	IOP 11:45-12:00 noon	TL-ESR Correlation studies in some TL phosphors: A review
	Y. S. Mayya	IOP 12:00-12:15 pm	Further analysis of the modified age equation in luminescence geochronology
	J. L. Genicot	IOP 12:15-12:30 pm	Radiation dosimetry with Optically Stimulated Luminescent detectors at the SCK•CEN
	B.N.Lakshminarasappa	IOP 12:30-12:45 pm	Swift heavy ion induced thermoluminescence studies in polycrystalline aluminum oxide
	S.Selvashekhara pandian	IOP 12:45-1:00 pm	Variation of indoor gamma dose rate in dwellings of Sattankulam taluk, Thoothukudi district near Kudankulam nuclear power project site
Lunch & Poster Session : 1:00-3:00 pm			
Poster NO. P ₆₀ -P ₆₉ , P ₁₀₅ -P ₁₁₄ , P ₁₃₅ -P ₁₃₇ , P ₁₄₅ -P ₁₉₃ , P ₂₀₀ -P ₂₀₃ , P ₂₁₅ -P ₂₂₉ , P ₂₅₀ -P ₂₅₅			
Session: 10 Time: 3:00-4:30 pm Luminescence in Amorphous materials Chairperson: Dr. N. Veeraiah	I. V. Kityik	IT 3:00-3:30 pm	Optically excited non-linear optical effects in glasses
	W. Sievers	IOP 3:30-3:45 pm	High-pressure luminescence study of Sm3+, Eu3+ and Tb3+ ions in oxide glasses
	Jean-Luc Adam	IOP 3:45-4:00	Optical properties and applications of rare-earth-

		pm	doped non-oxide glasses
	Victor Lavin	IOP 4:00-4:15 pm	Optical properties of the rare earth ions in transparent nanocrystalline glass-ceramics
	B. Dussardier	IOP 4:15-4:30 pm	Local environment of active dopants in silica optical fibres
Tea : 4:30-5:00 pm			
Session: 11 Time: 5:00-6:30 pm CL, ML, EL, Sono, Chemi and Iono- Luminescence Chairperson: Dr. S. V. Moharil Dr. Harish Bahadur	B.P.Chandra	IT 5:00-5:30 pm	Mechanoluminescent smart materials for wireless sensors
	Shashi Bhushan	IT 5:30-6:00 pm	Nanocrystalline Properties of Chemically Deposited (Cd-Pb)S films
	L. E. Bausa	IOP 6:00-6:15 pm	Micro-luminescence as tool to investigate the local effect of polarization inversion in the structure ferroelectric crystals
	O. L. Malta	IOP 6:15-6:30 pm	The chemical bond overlap plasmon as a tool for quantifying covalency in optical solid state materials
Time : 7-00 -8-00 pm	GBM, LSI		
Dinner			

16 February 2008			
	Speaker	Lecture	Title of the Talk
Session: 12 Time: 9:00-10:30 am Photo and Optically Stimulated Luminescence (II) Chairperson: Dr. Godfrey-Smith Dr. M.P.Chougaonkar	N.G.Kiyak	IT 9:00-9:30 am	Examination of stimulation at elevated temperatures to minimize the recuperated OSL signal observed in quartz samples
	N.Veeraiah	IOP 9:30-9:45 am	Fluorescence spectral studies of chromium titanium and manganese ions in phosphate glass ceramics
	M.K.Murari	IOP 9:45-10:00 am	Efficacy of component specific analysis of Optically Stimulated Luminescence decay in estimation of paleodose
	N. Suryamurthy	IOP 10:00-10:15 am	Luminescence studies during combustion synthesis of a long afterglow Phosphor $Sr_4Al_{14}O_{25}:Eu^{2+}, Dy^{3+}$
	M.S.Kulkarni	IOP 10:15-10:30 am	Development of Optically Stimulated Luminescence Reader Systems in BARC

Tea: 10:30-11:00am			
Session: 13 Time: 11:00-1:00 pm Bioluminescence & Sensors, Low Temp Lum., New applications Chairperson: Dr. Selvashekharapandian Dr. Georges Boulon	L. Rey	IT 11:00-11:30 am	Role of gases in low - temperature thermoluminescence of dynamized deuterium oxide
	T. Prevensilk	IOP 11:30-11:45 am	QED Induced Luminescence
	Santa Chawla	IOP 11:45-12:00 noon	Development of phosphors for white LED
	D. I. Godfrey Smith	IOP 12:00-12:15 pm	Retrospective dosimetry potential of high performance electronic substrates
	A. Pattnaik/ P.D.Sahare	IT 12:15-12:30 pm	A sensor for acetone using a laser grade dye - malachite green
	K. V. R. Murthy	IOP 12: 30-12:45 pm	Low Temperature Thermally Stimulated Luminescence Characteristics of Rice Flour with and with out H ₂ O and D ₂ O
	Pallavi Page	IOP 12: 45-1:00 pm	Low Temperature Thermoluminescence of Sr ₃ Al ₂ O ₆ :X,Y
Lunch & Poster Session : 1:00-3:00 pm Poster NO. P₆₀-P₆₉, P₁₀₅-P₁₁₄, P₁₃₅-P₁₃₇, P₁₄₅-P₁₉₃, P₂₀₀-P₂₀₃, P₂₁₅-P₂₂₉, P₂₅₀-P₂₅₅			
Concluding Session 3-00-4-00 pm			

KN – Keynote address (40 min) IOP – Invited Oral Presentation (15 min) PL – Plenary lecture (30 min)
 EL--Evening Lecture (60 min) IT – Invited Talk (30 min)