# Phosphor Safari 2022 The 12<sup>th</sup> International Symposium on Phosphor Materials

Lanzhou, CHINA July 30<sup>th</sup> – August 3<sup>rd</sup>, 2022

**Program Book** 

# Conference Catalogue

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## I. GENERAL INFORMATION

he Phosphor Safari (International Symposium for Luminescent Materials) was firstly established by Prof. Kenji Toda, Prof. Hajime Yamamoto, and Prof. Dae Ho Yoon in 2009 with the aim of promoting discussion and interaction between young researchers and leading scientists related to the phosphor field.

In the past 13 years, the Phosphor Safari have been successfully held in Niigata (2009, 2011, 2015), Suwon (2010), Hsinchu (2012), Jeju (2013), Kunming (2014), Hong Kong (2016), Gdansk (2017), Seoul (2018), Xiamen (2019), and greatly advanced the development of science, technology, and industry of phosphors. In 2020, the honor for hosting this great event is passed to Lanzhou, a major stop on the ancient "Silk Road" in the northwest of China.

Suffering from ongoing COVID-19 health and safety issues, the 12th international symposium has been postponed from its original date August 1-5, 2020 to July 31-August 4, 2021, and then to July 30-August 3, 2022. The organizing committee cordially invites the colleagues and friends from both academics and industries to attend Phosphor Safari 2022 (The 12th International Symposium for Luminescent Materials) held at Lanzhou University in forms of online meeting.

The topics of Phosphor Safari 2022 include but not limited to:

- Up-conversion, Nano-bio Luminescence Materials;
- LEDs, Mini LEDs, Micro LEDs, LED lasers;
- Horticultural and Human Centric Lighting;
- Luminescence for Solar Photon Conversion;
- Others.

We will continue the positive role of previous conferences in promoting the discipline development and industrial integration of phosphor materials, and build a platform for communication and exchange for colleagues around the world. We sincerely welcome you to join us!

Yuhua Wony

Yuhua Wang Conference chairman

Lanzhou University, China

## **II. COMMITTEES**

#### HONORARY CHAIRMAN

Yan, Chunhua (Lanzhou University, Academician of CAS, China) Meijerink, Andries (Utrecht University, Academician of KNAW, Netherlands; Lanzhou University, China) Zhang, Hongjie (Tsinghua University, Academician of CAS, China) Liu, Yichun (Northeast Normal University, Academician of CAS, China)

### CHAIRMAN

Wang, Yuhua (Lanzhou University, China)

### SECRETARY

Wang, Deyin (Lanzhou University, China)

#### LOCAL ORGANIZING COMMITTEES (Lanzhou University, China)

Ci, Zhipeng; Liu, Wenjing; Liu, Xiaozhen; Liu, Bin; Li, Huihui; Li, Tianrong; Ma, Ru;

Wang, Dan; Wang, Manxin; Wang, Xicheng; Zhang, Jiachi; Zhao, Zhenyan; Zhang, Zhiya; Zhang, Shuihe.

#### NTERNATIONAL ADVISORY COMMITTEES

- Chen,Wei (University of Texas at Arlington, USA)
- Chen, Xueyuan (Fujian Institute of Research on the Structure of Matter, CAS, China)
- Dorenbos, Pieter (Delft University of Technology, Netherlands)
- Hao, Jianhua (The Hong Kong Polytechnic University, Hong Kong, China)
- Huang, Ling (Xinjiang University, China)
- Im, Won Bin (Chonnam National University, Korea)
- Isobe, Tetsuhiko (Keio University, Japan)
- Jin, Dayong (University of Technology Sydney, Australia)
- Li, Chunxia (Zhejiang Normal University, China)
- Lin, Jun (Changchun Institute of Applied Chemistry, CAS, China)
- Liu, Ru-Shi (Taiwan University, Taiwan, China)

- Liu, Xiaogang (National University of Singapore, Singapore)
- Meijerink, Andries (Utrecht University, Netherlands)
- Ong, Shyue Ping (University of California, USA)
- Qian, Guodong (Zhejiang University, China)
- Qiu, Jianbei (Kunming University of Science and Technology, China)
- Qiu, Jianrong (Zhejiang University, China)
- Seshadri, Ram (University of California, USA)
- Sohn, Kee-Sun (Sejong University, Korea)
- Song, Hongwei (Jilin University, China)
- Sun, Lingdong (Peking University, China)
- Tanabe, Setsuhisa (Kyoto University, Japan)
- Toda, Kenji (Niigata University, Japan)
- Takatoshi, Seto (Lanzhou University, Lanzhou)
- Wang, Jing (Sun Yat-sen University, China)
- Wang, Xiao-Jun (Georgia Southern University, USA)
- Wang, Yuhua (Lanzhou University, China)
- Wang, Deyin (Lanzhou University, China)
- Wong, Ka-Leung (Hong Kong Baptist University, Hong Kong, China)
- Wu, Mingmei (Sun Yat-sen University, China)
- Xia, Zhiguo (South China University of Technology, China)
- Xie, Rongjun (Xiamen University, China)
- Xu, Chao-Nan (National Institute of Advanced Industrial Science and Technology, Japan)
- Xue, Dongfeng (Changchun Institute of Applied Chemistry, CAS, China)
- Yoon, Dae Ho (Sungkyunkwan University, Korea)
- Zeng, Haibo (Nanjing University of Science and Technology, China)
- Zhang, Junying (Beihang University, China)
- Zhang, Fan (Fudan University, China)
- Zhong, Haizheng (Beijing Institute of Technology, China)

## **III. CONFERENCE INSTRUCTIONS**

#### □ **P**articipation Type

- In this conference, (1) Plenary Lecture, (2) Keynote Lecture, (3) Invited Lecture, (4) Oral Presentation, and (4) Poster Presentation are included.
- All types of reports are made online. KouShare (a pure academic video and live telecast web platform) provides the conference service for the online meeting of Phosphor Safari 2022.
- Please visit ZOOM meeting room for live broadcast, and https://www.koushare.com/topicIndex/i/PS2022 for transmission and playback.

Abbreviations	Туре	Total Time		
PL	Plenary Lecture	25 min (20 min Talk + 5 min Q&A)		
KL	Keynote Lecture	20 min (15 min Talk + 5 min Q&A)		
IL	Invited Lecture	15 min (10 min Talk + 5 min Q&A)		
0	Oral Presentation	10 min (7 min Talk + 3 min Q&A)		
РР	Poster Presentation	5 min Talk or Display in PDF format		

#### □ Abbreviations and Total Time for Each Type

 Instructions to Plenary Lecture, Keynote Lecture, Invited Lecture, and Oral Presentation

- The attendees should log in to their ZOOM meeting room at least 30 minutes before their speech. Pay attention to the speech progress.
- The attendees can record their talk and send the video talk to the Local Organizing Committees at ps2020@lzu.edu.cn. Alternatively, the attendees can give a live online talk at the assigned slot. In the former case, the attendees must be present online during their video talk and get ready to answer questions from other attendees.

#### □ Instructions to Poster Presentation

- The attendees can record your presentations (within 5 min) or use a PDF file and send it to Local Organizing Committees at ps2020@lzu.edu.cn. Their presentations will be displayed on line at https://www.koushare.com/topicIndex/i/PS2022.
- The attendees must be present online at the assigned slot and get ready to answer questions from other attendees.

#### **B**est Poster Presentation Awards

- Six best poster presentation awards will be will be selected from all the poster presenters by the Advisory Committees on the night of Aug. 1, 2022.
- An awarding ceremony will be held on the afternoon of Aug. 2, 2022. Winners will be awarded certificates and bonus.

#### □ About Online Display

- In order to further show the academic thoughts and achievements of the attendees, all types of reports in this conference will be recorded and uploaded to KouShare website.
- If you are not expecting your lecture to be recorded and displayed on the KouShare website, please kindly write Local Organizing Committees at ps2020@lzu.edu.cn before July, 26, 2022.

## IV. CONFERENCE SCHEDULE

## Note:

All the time involved in this CONFERENCE SCHEDULE refers to the time of UTC/GMT+08:00!!

### OVERVIEW

Date	Event Arrangement	
July 30, 2022	Registration and check-in	
July 31-August 2, 2022	Conference time	
August 3, 2022	Departure	

## **A. SCHEDULE AT A GLANCE**

	A.M.			P.M.					
July 31.	08:0012:10				14:0017:10			19:0021:55	
Sunday	day MEETING ROOM A OPENING CEREMONY, PL01PL08			MEETING ROOM A			MEETING ROOM A		
					PL09PL15			PL16PL22	
			https://us06	web.zoom.us/j/83001 <b>ZOOM I.D.</b> :	L382568?pwd=ME80 830 0138 2568, <b>Pas</b>	MWgvbnNEaUF0N2xX sword: 944451	V1U5UzhKdz09		
		A.	М.		P.M.				
	08:3012:20			14:0018:15 14:0018:30			20:3022:00		
Aug. 1,	MEETING ROOM A	MEETING ROOM B	MEETING ROOM C	MEETING ROOM D	MEETING ROOM E	MEETING ROOM F	MEETING ROOM G	MEETING ROOM H	POSTER
	KL, IL	KL, IL	KL, IL	KL, IL	KL, IL	KL, IL	KL, IL	KL, IL, O	PP
Monday	https://us06web. zoom.us/j/83646 420324?pwd=V0x 6Wmd2eIRCQzhR TDNPR0xIRHZhZz 09 <b>ZOOM I.D.:</b> 836 4642 0324 <b>Password:</b> 078844	https://us06web. zoom.us/j/89510 943202?pwd=Tk NHbGdiSFRONGZ HWEpTbm02SU MxUT09 <b>ZOOM I.D.:</b> 895 1094 3202 <b>Password:</b> 609640	https://us06web. zoom.us/j/89168 097115?pwd=czR SL2ZqQ3NjMTh0 MW1TTVBtL3p6d z09 <b>ZOOM I.D.:</b> 891 6809 7115 <b>Password:</b> 573539	https://us06web.z oom.us/j/8690579 5478?pwd=eVR2R WINM09MRnE4S WoyOVcrS1BhZz0 9 <b>ZOOM I.D.:</b> 869 0579 5478 <b>Password:</b> 687852	ttps://us06web.z oom.us/j/836464 20324?pwd=V0x6 Wmd2elRCQzhRT DNPR0xIRHZhZz0 9 <b>ZOOM I.D.:</b> 836 4642 0324 <b>Password:</b> 078844	https://us06web.z oom.us/j/8951094 3202?pwd=TkNHb GdiSFRONGZHWE pTbm02SUMxUT0 9 <b>ZOOM I.D.:</b> 895 1094 3202 <b>Password:</b> 609640	https://us06web.z oom.us/j/8916809 7115?pwd=czRSL2 ZqQ3NjMTh0MW1 TTVBtL3p6dz09 <b>ZOOM I.D.:</b> 891 6809 7115 <b>Password:</b> 573539	https://us06web.z oom.us/j/8690579 5478?pwd=eVR2R WINM09MRnE4SW oyOVcrS1BhZz09 <b>ZOOM I.D.:</b> 869 0579 5478 <b>Password:</b> 687852	https://www.kou share.com/topicl ndex/i/PS2022

## **A. SCHEDULE AT A GLANCE**

	A.M.				P.M.
	08:3012:10			14:0017:50	
	MEETING ROOM A	MEETING ROOM B	MEETING ROOM C	MEETING ROOM D	MEETING ROOM
Aug. 2, Tuesday	KL, IL	KL, IL	KL, IL	KL, IL	PL23PL29, AWARDING CEREMONY, CLOSING CEREMONY & INVITATION TO NEXT PHOSPHOR SAFARI
	https://us06web. zoom.us/j/83646 420324?pwd=V0x 6Wmd2eIRCQzhR TDNPR0xIRHZhZz 09 <b>ZOOM I.D.:</b> 836 4642 0324 <b>Password:</b> 078844	https://us06web. zoom.us/j/89510 943202?pwd=Tk NHbGdiSFRONGZ HWEpTbm02SU MxUT09 <b>ZOOM I.D.:</b> 895 1094 3202 <b>Password:</b> 609640	https://us06web. zoom.us/j/89168 097115?pwd=czR SL2ZqQ3NjMTh0 MW1TTVBtL3p6d z09 <b>ZOOM I.D.:</b> 891 6809 7115 <b>Password:</b> 573539	https://us06web.z oom.us/j/8690579 5478?pwd=eVR2R WINM09MRnE4S WoyOVcrS1BhZz0 9 <b>ZOOM I.D.:</b> 869 0579 5478 <b>Password:</b> 687852	https://us06web.zoom.us/j/83001382568?pwd=ME80MWgvbnNEaUF0N2xXV1U5U zhKdz09 <b>ZOOM I.D.:</b> 830 0138 2568, <b>Password:</b> 944451

## **B. SCHEDULE TABLE**

July 31, A.M.

MEETING ROOM A		VENUE COORDINATION: Deyin WANG, 18609481766, wangdy@lzu.edu.cn Xicheng WANG, 18293192370, wangxc@lzu.edu.cn
08:00-08:35	OPENING CEREMONY	<b>SPEAKER:</b> Chunhua YAN (President of Lanzhou University), Hongjie ZHANG (Tsinghua University), Yichun LIU (Northeast Normal University), Tetsuhiko ISOBE (Keio University, Japan), Yuhua WANG (Lanzhou University) HOST: Deyan HE (Lanzhou University)
		CHAIR: Xiaowei SUN, Dae Ho YOON, Hongwei SONG
08:35-09:00	PL-01: Xiaogang LIU National University of Singapore, Singapore	Luminescent nanoparticles: a wonderful toolbox for imaging and assistive technologies
09:00-09:25	PL-02: Lingdong SUN Peking University	Lanthanide luminescent nanoparticles: opportunities and challenges
09:25-09:50	PL-03: Setsuhisa TANABE Kyoto University, Japan	Photochromic persistent phosphors
09:50-10:15 PL-04: Rongjun XIE Xiamen University		Laser phosphors and their applications
	COFFEE BR	EAK 10:15-10:30
		CHAIR: Xiaogang LIU, Lingdong SUN, Setsuhisa TANABE
10:30-10:55	PL-05: Xiaowei SUN Southern University of Science and Technology	Quantum dot displays
10:55-11:20	PL-06: Dae Ho YOON Sungkyunkwan University, Korea	Polymer encapsulation of halide perovskite luminescence materials for display and lighting technology
11:20-11:45	PL-07: Hongwei SONG Jilin University	Rare earth doped perovskite phosphors and their applications in photoelectric devices and laser emission diodes
11:45-12:10	PL-08: Jianhua HAO The Hong Kong Polytechnic University	Upconversion nanophosphor-based biosensing platform for point-of-care testing viral infections
	LUNCH	12:10-14:00

## July 31, P.M.

MEETING ROOM A		VENUE COORDINATION: Deyin WANG, 18609481766, wangdy@lzu.edu.cn Xicheng WANG, 18293192370, wangxc@lzu.edu.cn	
		CHAIR: Jun LIN, Rongjun XIE, Jianhua HAO	
14:00-14:25	PL-09: Jianrong QIU Zhejiang University	Fs laser induced luminescence phenomena and their applications	
14:25-14:50	PL-10: Xueyuan CHEN Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences	Luminescent all-inorganic perovskite nanocrystals: electronic structure and opti properties	
14:50-15:15	PL-11: Xiaolong CHEN Institute of Physics, Chinese Academy of Sciences	Structure analysis and properties: from luminous borates to superconducting compounds	
15:15-15:40 PL-12: Fan ZHANG Fudan University		NIR-II fluorescent probes for in vivo multiplexed biodetection	
	COFFEE BRI	EAK 15:40-15:55	
		CHAIR: Jianrong QIU, Xueyuan CHEN, Xiaolong CHEN	
15:55-16:20	PL-13: Jun LIN Changchun Institute of Applied Chemistry, Chinese Academy of Sciences	NIR-triggered multifunctional optical materials for biomedical application	
16:20-16:45	PL-14: Hong ZHANG University of Amsterdam, The Netherlands	Size matters–quantitatively unravel the fundamental problems in doped phosphor	
16:45-17:10 PL-15: Takatoshi SETO Lanzhou University		Stable LED phosphors and their recent phenomena such as large Stokes shift, electron trap, and narrow emission	
	DINNER	17:10-19:00	

	MEETING ROOM A	VENUE COORDINATION: Deyin WANG, 18609481766, wangdy@lzu.edu.cn Xicheng WANG, 18293192370, wangxc@lzu.edu.cn	
		CHAIR: Hong ZHANG, Tsun-Kong SHAM, Gang HAN	
19:00-19:25	PL-16: Andries MEIJERINK Utrecht University, Lanzhou University	Luminescence thermometry: basics and applications	
19:25-19:50	19:50 PL-17: Wei CHEN University of Texas at Arlington, U.S. The invention of copper cysteamine illuminating numerous areas		
19:50-20:15 PL-18: Bruno VIANA Institut de Recherche de Chimie-Paris, France		Persistent luminescence materials at nanosize	
		CHAIR: Andries MEIJERINK, Wei CHEN, Bruno VIANA	
20:15-20:40	PL-19: Tsun-Kong SHAM Western University, Canada	X-ray excited optical luminescence from phosphors	
20:40-21:05	PL-20: Gang HAN University of Massachusetts Chan Medical School, U.S.	See the unseen via upconversion nanoparticles	
21:05-21:30	PL-21: Fiorenzo VETRONE INRS, Varennes, Canada	Rare earth doped nanoparticles: from synthesis to applications in nanomedicine	
21:30-21:55	PL-22: Joe R ZHAO University of British Columbia, Tri-Y Environmental Research, Canada	Introduction to PV efficiency enhanced by temperature control materials (TCM)	

## Aug. 1, A.M.

MEETING ROOM A	MEETING ROOM B	MEETING ROOM C	MEETING ROOM D
VENUE COORDINATION Jiachi ZHANG: 15002532235, zhangjch@lzu.edu.cn Jinyu ZHOU	VENUE COORDINATION Zhipeng CI: 18193183350, cizhp@lzu.edu.cn; Jiapeng WU	VENUE COORDINATION Wenjing LIU: 13309416810, wjliu@lzu.edu.cn; Jiejun REN	VENUE COORDINATION Dan WANG: 13619365949, wangdan@lzu.edu.cn; Yaxin CAO
CHAIR: Yuansheng WANG, Quanlin LIU, Guogang LI	CHAIR: Zhiwei LIU, Quan YUAN, Chengyu LI	CHAIR: Guanying CHEN, Jiawen XIAO, Yixi ZHUANG	CHAIR: Chun Che LIN, Jing WANG, Haomiao ZHU
08:30-08:50 <b>KL-01: Jiang Tang</b> Huazhong University of Science and Technology Rare earth light emitted diodes (ReLED) based on f-d transition	08:30-08:50 <b>KL-02: Xiaojun WANG</b> Georgia Southern University, U.S. Glow-in-the-daylight phenomenon of storage phosphors	08:30-08:50 <b>KL-03: Kenji TODA</b> Niigata University, Japan New type synthesis methods for phosphor materials	08:30-08:50 <b>KL-04: Jingtai ZHAO</b> Guilin University of Electronic Technology Wide gap semiconducting mechanoluminescence materials and their potential applications
08:50-09:10 <b>KL-05: Xue BAI</b> Jilin University Efficient white light emitting materials and devices	08:50-09:10 <b>KL-06: Shuyan SONG</b> Changchun Institute of Applied Chemistry, Chinese Academy of Sciences Lanthanide-doped upconversion nanomaterials: from design to application of theranostics	08:50-09:10 <b>KL-07: Yu TANG</b> Lanzhou University Studies on the smart luminescent materials based on rare-earth complexes	08:50-09:10 <b>KL-08: Matthew McCluskey</b> Washington State University, U.S. Photoluminescence mapping of light- emitting devices and materials
09:10-09:30 <b>KL-09: Lixin NING</b> Anhui Normal University Role of the rigid host structure in narrow-band green emission of $Eu^{2+}$ in Rb <sub>2</sub> Na <sub>2</sub> (Li <sub>3</sub> SiO <sub>4</sub> )	09:10-09:30 <b>KL-10: Bo ZHOU</b> South China University of Technology Photon upconversion in nanostructures	09:10-09:30 <b>KL-11: Jiahua ZHANG</b> Changchun institute of optics, fine mechanics and physics, Chinese Academy of Sciences Pr <sup>3+</sup> doped electron trapping material for temperature sensing and optical memory	09:10-09:30 <b>KL-12: Piaoping YANG</b> Harbin Engineering University Design and anti-cancer performance mediated by near infrared light

09:30-09:45 <b>IL-01: Mengmeng SHANG</b> Shandong University Ultra-broadband green-emitting phosphors without cyan gap based on double-heterovalent substitution strategy for full-spectrum WLED lighting	09:30-09:45 <b>IL-02: Lijia LIU</b> Western University, Canada Chromium-doped zinc gallium oxide- calcium phosphate nanocomposite with persistent luminescence	09:30-09:45 <b>IL-03: Li Ll</b> Chongqing University of Posts and Telecommunications High-sensitivity luminescent thermometer based on Mn <sup>4+</sup> /Sm <sup>3+</sup> dual-emission centers in double-perovskite tellurate	09:30-09:45 <b>IL-04: Panlai LI</b> Hebei University Performance regulation and application of near infrared luminescent materials					
09:45-10:00 <b>IL-05: Shuxing LI</b> Xiamen University Data-driven discovery of novel phosphors	09:45-10:00 <b>IL-06: Renren DENG</b> Zhejiang University Energy management of organic- inorganic hybrid upconversion nanomaterials	09:45-10:00 <b>IL-07: Yunlong LI</b> Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences Advanced X-ray detector for low- dose medical imaging	09:45-10:00 <b>IL-08: Kengo SUZUKI</b> Hamamatsu Photonics K.K., Japan Absolute PL quantum yields in the near-infrared region					
10:00-10:15 <b>IL-09: Yun SHI</b> Shanghai Institute of Ceramics, Chinese Academy of Sciences (Ce,Gd) <sub>3</sub> (Ga,AI) <sub>5</sub> O <sub>12</sub> crystals: growth and luminescence	10:00-10:15 <b>IL-10: Suli WU</b> Dalian University of Technology Upconversion nanoparticle-integrated bilayer inverse opal photonic crystal film for the triple anticounterfeiting	10:00-10:15 <b>IL-11: Yongjie WANG</b> Chongqing University of Posts and Telecommunications High pressure probes of electronic, structural and luminescence properties of transition-metal and lanthanide systems	10:00-10:15 <b>IL-12: Puxian XIONG</b> South China University of Technology Research exploration of NIR mechanoluminescence phosphor					
	COFFEE BREAK 10:15-10:30							
CHAIR: Jiang TANG, Xue BAI, Lixin NING	CHAIR: Xiaojun WANG, Shuyan SONG, Bo ZHOU	CHAIR: Kenji TODA, Yu TANG, Jiahua ZHANG	CHAIR: Jingtai ZHAO, Matthew McCluskey, Piaoping YANG					
10:30-10:50 <b>KL-13: Yuansheng WANG</b> Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences Abnormal thermal enhanced luminescence and its universality mechanism in rare-earth doped nanocrystals	10:30-10:50 <b>KL-14: Zhiwei LIU</b> Peking University Electroluminescence of d-f transition rare earth complex	10:30-10:50 <b>KL-15: Guanying CHEN</b> Harbin Institute of Technology Time-domain lanthanide luminescence bioimaging and biosensing	10:30-10:50 <b>KL-16: Chun Che LIN</b> Taipei University of Technology Cr <sup>3+</sup> -sphere effect on the Whitlockite- type NIR phosphor Sr <sub>9</sub> Sc(PO <sub>4</sub> ) <sub>7</sub> with high heat dissipation for digital medical applications					

10:50-11:10 <b>KL-17: Quanlin LIU</b> University of Science and Technology Beijing Several efficient near-infrared Cr <sup>3+</sup> - activated phosphors	10:50-11:10 <b>KL-18: Quan YUAN</b> Hunan University Controlled synthesis of persistent luminescence nanomaterials	10:50-11:10 <b>KL-19: Jiawen XIAO</b> Beijing University of Technology Synthesis of metal halide scintillators for X-ray imaging	10:50-11:10 <b>KL-20: Jing WANG</b> Sun Yat-sen University Transitional metal ions activated NIR- emitting phosphors for multimodal applications		
11:10-11:30 <b>KL-21: Guogang LI</b> China University of Geosciences (Wuhan) Design and synthesis of bismuth activated luminescent materials and their application in LED	11:10-11:30 <b>KL-22: Chengyu LI</b> Changchun Institute of Applied Chemistry, Chinese Academy of Sciences Realizing ultraviolet and white persistent luminescence of Pr <sup>3+</sup> in BaLu <sub>2</sub> Al <sub>2</sub> Ga <sub>2</sub> SiO <sub>12</sub> by structure and defect modification	11:10-11:30 <b>KL-23: Yixi ZHUANG</b> Xiamen University Developing new mechanoluminescent phosphors and high-sensitivity mechanoluminescence-based stress sensor	11:10-11:30 <b>KL-24: Haomiao ZHU</b> Xiamen Institute of Rare-earth Materials, Chinese Academy of Sciences Synthesis and optical properties of Mn <sup>4+</sup> /Cr <sup>3+</sup> -doped deep red and NIR phosphors		
11:30-11:50 <b>KL-25: Luyi SUN</b> University of Connecticut, U.S. Ultralong lifetime and efficient room temperature phosphorescent carbon dots through multiconfinement structure design	11:30-11:45 <b>IL-13: Shihui WEN</b> University of Technology Sydney, Australia Engineering bright and multifunctional upconversion nanoparticles	11:30-11:45 <b>IL-14: Ling HE</b> Lanzhou University of Technology Luminescent fibers applied in sensing micro-stress strain in metal composites matrix	11:30-11:45 <b>IL-15: Fei TANG</b> Jiangsu Normal University Luminescence performance and vibronic behavior of Mn <sup>4+</sup> -activated Ca <sub>14</sub> Al <sub>10</sub> Zn <sub>6</sub> O <sub>35</sub> deep-red phosphor synthesized by full-solution combustion method		
11:50-12:05 <b>IL-16: Mu-Huai Fang</b> Academia Sinica High-performance lithosilicate phosphor for backlighting light- emitting diodes	11:45-12:00 <b>IL-17: Yanjie LIANG</b> Shandong University Persistent phosphors emitting in the ultraviolet and their applications	11:45-12:00 <b>IL-18: Feng ZHANG</b> Henan University Site preference and the optical thermometry strategy by different temperature response from two sites environment of $Mn^{2+}$ in $K_7ZnSc_2B_{15}O_{30}$	11:45-12:00 <b>IL-19: Zaifa PAN</b> Zhejiang University of Technology Performance regulation and biological detection application of near infrared persistent materials		
12:05-12:20 <b>IL-20: Libin XIA</b> Jiangxi University of Science and Technology Optical property of color-tunable phosphor glass ceramic for high- power illumination	12:00-12:15 <b>IL-21: Xiuping GAO</b> Lanzhou University Visible to near-infrared long persistent luminescence of rare earth doped Na <sub>2</sub> CaSn <sub>2</sub> Ge <sub>3</sub> O <sub>12</sub>	12:00-12:15 <b>IL-22: Tianshuai LV</b> Huaqiao University Unraveling electron liberation from Bi <sup>2+</sup> for designing Bi <sup>3+</sup> -based afterglow phosphor for anti- counterfeiting and flexible X-ray imaging	12:00-12:15 <b>IL-23: Jing GOU</b> Shaanxi Normal University Photon assistance improves perovskite solar cell performance		
LUNCH 12:20-14:00					

## Aug. 1, P.M.

MEETING ROOM E	MEETING ROOM F	MEETING ROOM G	MEETING ROOM H
VENUE COORDINATION Jiachi ZHANG: 15002532235, zhangjch@lzu.edu.cn Jinyu ZHOU	VENUE COORDINATION Zhipeng CI: 18193183350, cizhp@lzu.edu.cn; Jiapeng WU	VENUE COORDINATION Wenjing LIU: 13309416810, wjliu@lzu.edu.cn; Jiejun REN	VENUE COORDINATION Dan WANG: 13619365949, wangdan@lzu.edu.cn; Yaxin CAO
CHAIR: Yongzheng FANG, Lei CHEN, Shi YE	CHAIR: Takatoshi SETO, Mikhail BRIK, Chonggeng MA	CHAIR: Yaping DU, Zewei QUAN, Zhifeng SHI	CHAIR: Dechao YU, Songnan QU, Ping'an MA
14:00-14:20 <b>KL-26: Haibo ZENG</b> Nanjing University of Science and Technology Semiconductor quantum dot luminescence display: high definition, intelligence and environmental protection	14:00-14:20 <b>KL-27: Zhengtang LUO</b> The Hong Kong University of Science and Technology Design principle for single atom catalysts towards enhanced singlet oxygen photogeneration	14:00-14:20 <b>KL-28: Qianqian SU</b> Shanghai University Enhancement of lanthanide luminescence by surface-interface regulation	14:00-14:20 <b>KL-29: Mingmei WU</b> Sun Yat-Sen University Some strategies for improving (infra-) red emission intensity and stability
14:20-14:40 <b>KL-30: Lefu MEI</b> China University of Geosciences (Beijing) Design of mineral structure luminescent materials	14:20-14:40 <b>KL-31: Junying ZHANG</b> Beihang University Improvement of luminescence, photocatalytic and optoelectronic performances of semiconductors by tuning anion vacancy	14:20-14:40 <b>KL-32: Shixun LIAN</b> Hunan Normal University All-weather stable alkaline earth sulfide-based light-conversion materials for green-house cultivation	14:20-14:40 <b>KL-33: Baojiu CHEN</b> Dalian Maritime University Judd-Ofelt calculation strategy for trivalent rare-earth ions doped powdered materials
14:40-15:00 <b>KL-34: Huan JIAO</b> Shaanxi Normal University Explore new (oxo) nitridosilicate phosphors from metal flux synthesis	14:40-15:00 <b>KL-35: Manrong LI</b> Sun Yat-Sen University Pressure-assisted design for inorganic pigments by site- selective chromophore motifs	14:40-15:00 <b>KL-36: Jizhong SONG</b> Zhengzhou University Efficient quantum dot light- emitting diodes based on CsPbX <sub>3</sub>	14:40-15:00 <b>KL-37: Zhi ZHOU</b> Hunan Agricultural University Application and development of LED phosphor technology for plant lighting

15:00-15:15 <b>IL-24: Marie Anne van de Haar</b> Seaborough Amsterdam, The Netherlands Nano-engineered phosphors for (Micro) LEDs	15:00-15:15 <b>IL-25: Juncheng ZHANG</b> Ocean University of China Trap-controlled recoverable mechanoluminescence	15:00-15:15 <b>IL-26: Hong BI</b> Anhui University Luminescent carbon dots applied for next-generation ultraviolet light-conversion film and coatings	15:00-15:15 <b>IL-27: Zhen SONG</b> University of Science and Technology Beijing Fast crystal-field evaluation of 3d2 elements in tetrahedral site	
15:15-15:30 <b>IL-28: Yinsheng XU</b> Wuhan University of Technology Tb doped magneto-optical borogermanate glasses	15:15-15:30 <b>IL-29: Zhongxian QIU</b> Hunan Normal University Dual anion vacancy in apatite systems	15:15-15:30 <b>IL-30: Tong WEI</b> Civil Aviation University of China Reversible luminescence regulation of rare earth doped ferroelectric materials induced by light irradiation	15:15-15:30 <b>IL-31: Xiyan LI</b> Nankai University Slowing down for growth mechanism and speeding up for performance optimization based on single ligand passivated CsPbBr <sub>3</sub> nanoplatelets	
15:30-15:45 <b>IL-32: Huibing XU</b> Grirem Advanced Materials Co.,Ltd The design and development of new oxynitride phosphors La-Si(AI)- N(O)-Eu/Ce	15:30-15:45 <b>IL-33: Dangli GAO</b> Xi'an University of Architecture and Technology Achieving opto-responsive multimode luminescence in persistent phosphors for anti- counterfeiting and latent fingerprint imaging	15:30-15:45 <b>IL-34: Shivaramu N J</b> University of the Free State, South Africa Green persistent luminescence in Tb-doped barium aluminate phosphors	15:30-15:45 <b>IL-35: Yang LIU</b> Zhejiang University High performance PeLEDs based on in-situ formed nanostructures	
COFFEE BREAK 15:45-16:00				
CHAIR: Haibo ZENG, Lefu MEI, Huan JIAO	CHAIR: Junying ZHANG, Manrong LI, Siyu LU	CHAIR: Qianqian SU, Shixun LIAN, Jizhong SONG	CHAIR: Mingmei WU, Baojiu CHEN, Zhi ZHOU,	
CHAIR: Haibo ZENG, Lefu MEI, Huan JIAO 16:00-16:20 KL-38: Yongzheng FANG Shanghai Institute of Technology Applied fundamental research from phosphor to quantum dot for solid state lighting and display	CHAIR: Junying ZHANG, Manrong LI, Siyu LU 16:00-16:20 KL-39: Mikhail BRIK University of Tartu, Republic of Estonia Mn <sup>4+</sup> -based red phosphors for white LED – theoretical modeling	CHAIR: Qianqian SU, Shixun LIAN, Jizhong SONG 16:00-16:20 KL-40: Yaping DU Nankai University Rare-earth-containing halide perovskite luminescent materials	CHAIR: Mingmei WU, Baojiu CHEN, Zhi ZHOU, 16:00-16:20 KL-41: Dechao YU University of Shanghai for Science and Technology High-precision Boltzmann thermometry over a wide temperature range with Gd <sup>3+</sup>	

16:40-17:00 <b>KL-46: Siyu LU</b> Zhengzhou University Photoluminescence of carbonized polymer dots	16:40-17:00 <b>KL-47: Shi YE</b> South China University of Technology Spin exchange interaction among Mn <sup>2+</sup> ions and effect on the decay of Mn <sup>2+</sup> emission	16:40-17:00 <b>KL-48: Zhifeng SHI</b> Zhengzhou University Light-emitting devices based on lead-free halide perovskites	16:40-17:00 <b>KL-49: Ping'an MA</b> Changchun Institute of Applied Chemistry, Chinese Academy of Sciences Tumor microenvironment-triggered in-situ cancer vaccines for immunotherapy
17:00-17:15 <b>IL-36: Zhijun WANG</b> Hebei University Improvement of the thermal stability of bluish-cyan emitting phosphor Y <sub>2</sub> MgAl <sub>4</sub> SiO <sub>12</sub> :Eu <sup>2+</sup> using public that is a participant (7p, Co, Sr) for	17:00-17:15 <b>IL-37: Markus SUTA</b> Heinrich Heine University Düsseldorf, Germany Luminescence thermometry-a marriage between thermodynamics and kinetics	17:00-17:15 <b>IL-38: Xiaoming LI</b> Nanjing University of Science and Technology Metal halide nanocrystals and optoelectronic applications	17:00-17:10 <b>O1: Veeramani RAJENDRAN</b> Taipei University of Technology Chromium ion pair luminescence: a strategy in broadband near-infrared light-emitting diode design
white LEDs			17:10-17:20 <b>O2: Ke SU</b> China University of Geosciences (Beijing) Composition, structure and luminescence properties of novel pyroxene structure phosphors
17:15-17:30 <b>IL-39: Guantong CHEN</b> Grirem Advanced Materials Co.,Ltd Design of the luminescence in (Sr,Gd)Li(Al,Mg) <sub>3</sub> N <sub>4</sub> :Eu <sup>2+</sup> deep red phosphor via crystal field	17:15-17:30 <b>IL-40: Rui Shi</b> Stockholm University, Sweden Understanding the shell passivation in Ln <sup>3+</sup> -doped luminescent nanocrystals	17:15-17:30 <b>IL-41: Guankui LONG</b> Nankai University Chiral hybrid organic-inorganic perovskites	17:20-17:30 <b>O3: Fangyi ZHAO</b> University of Science and Technology Beijing Effect of octahedral local structure on near- infrared luminescence property of Cr <sup>3+</sup> - activated phosphors
engineering for full-spectrum WLEDs			17:30-17:40 <b>O4: Xin PAN</b> China University of Geosciences (Beijing) Anti-defect engineering and activators lattice migration strategy customized for high efficiency and tunable whitlockite phosphors
17:30-17:45 <b>IL-42: Tianrong LI</b> Lanzhou University Study on several optical conversion materials for (micro) LEDs	17:30-17:45 <b>IL-43: Jonas JOOS</b> University of Ghent, Belgium On the staircase structure in Eu <sup>2+</sup> absorption and excitation spectra	17:30-17:45 <b>IL-44: Jing ZHAO</b> University of Science and Technology Beijing	17:40-17:50 <b>O5: Shengqiang LIU</b> University of Science and Technology Beijing Two NIR super-long persistent luminescence phosphors La(Mg/Zn)(Al/Ga) <sub>11</sub> O <sub>19</sub> :Cr <sup>3+</sup> ,Yb <sup>3+</sup> and Sr(Ga,In) <sub>12</sub> O <sub>19</sub> :Cr <sup>3+</sup>

		Study on organic-inorganic metal halide luminescent materials with high resistance to thermal quenching	17:50-18:00 <b>O6: Songsong DING</b> Lanzhou University Ultra-broadband near-infrared long persistent luminescent material induced by multi-lattice occupation	
17:45-18:00 <b>IL-45: Simon OGUGUA</b> University of the Free State, South Africa Luminescence thermometry properties of Sr <sub>3</sub> Al <sub>2</sub> O <sub>5</sub> Cl <sub>2</sub> :Eu <sup>2+</sup>	17:45-18:00 <b>IL-46: Yujie ZHAO</b> Henan University of Science and Technology Waterproof surface passivation of K <sub>2</sub> GeF <sub>6</sub> :Mn <sup>4+</sup> by a dense Al <sub>2</sub> O <sub>3</sub> layer via atomic layer deposition	17:45-18:00 <b>IL-47: Xicheng WANG</b> Lanzhou University Micro-Nano luminescence materials for (micro) LEDs	18:00-18:10 <b>O7: Meng ZHAO</b> University of Science and Technology Beijing A series of Cr <sup>3+</sup> -doped double perovskite antimonates, efficient and tunable phosphors from NIR-I to NIR-II	
			18:10-18:20 <b>O8: Chenchen WANG</b> Techcomp Instrument Ltd. Edinburgh instruments fluorescence technology: new application, new development	
18:00-18:15 <b>IL-48: Ge ZHU</b> Dalian Minzu University Local structure modification for identifying the site preference and characteristic luminescence property of $Eu^{2+}$ ions in full-color emission phosphors $Sr_{18}Mg_3(PO_4)_{14}:Eu^{2+}$	18:00-18:15 <b>IL-49: Yunlu DAI</b> University of Macau Metal-phenolic network (MPN) biomaterials	18:00-18:15 <b>IL-50: Xizhen ZHANG</b> Dalian Maritime University Long-wavelength pass filters of perovskite quantum dots glasses	18:20-18:30 <b>O9: Le ZHANG</b> Jiangsu Xiyi Advanced Materials Research Institute of Industrial Technology Welcome to join the R&D center of jiangsu provincial for optics materials	
	DINN	ER 18:30-20:30		
20:30-22:00, <b>POSTER,</b> On-line				

## Aug. 2, A.M.

MEETING ROOM A	MEETING ROOM B	MEETING ROOM C	MEETING ROOM D
VENUE COORDINATION Jiachi ZHANG: 15002532235, zhangjch@lzu.edu.cn; Jinyu ZHOU	VENUE COORDINATION Zhipeng CI: 18193183350, cizhp@lzu.edu.cn; Jiapeng WU	VENUE COORDINATION Wenjing LIU: 13309416810, wjliu@lzu.edu.cn; Jiejun REN	VENUE COORDINATION Dan WANG: 13619365949, wangdan@lzu.edu.cn; Yaxin CAO
CHAIR: Haizheng ZHONG, Zhigang ZHAO, Guanjun XIAO	CHAIR: Yang LI, Yinghui WANG, Zia ur REHMAN	CHAIR: Youxuan ZHENG, Zhijun ZHANG, Hongwu ZHANG	CHAIR: Qi CHEN, Guoping DONG, Jun XU
08:30-08:50 <b>KL-50: Chunxiang XU</b> Southeast University Quantitative regulation composition and defect-related charge carrier dynamics in perovskite	08:30-08:50 <b>KL-51: Ling HUANG</b> Xinjiang University Material structure and luminescence property modulation	08:30-08:50 <b>KL-52: Weidong ZHUANG</b> University of Science and Technology Beijing Design and modification of novel phophors based on multisite regulation strategy	08:30-08:50 <b>KL-53: Tierui ZHANG</b> Technical Institute of Physics and Chemistry, Chinese Academy of Sciences Defective layered double hydroxide based nanostructured photocatalysts for solar fuels and value-added chemicals
08:50-09:10 <b>KL-54: Yizheng JIN</b> Zhejiang University Device physics and materials chemistry of quantum-dot light- emitting diodes	08:50-09:10 <b>KL-55: Sanyang HAN</b> Tsinghua Shenzhen International Graduate School Exploring new chemistry and photophysics of lanthanide-based energy conversion nanocrystals	08:50-09:10 <b>KL-56: Ramaswami</b> <b>SAMMYNAIKEN</b> University of Saskatchewan, Canada Flax orbitide emitting material – a single molecule white emitter	08:50-09:10 <b>KL-57: Qiuqiang ZHAN</b> South China Normal University Migrating photon avalanche enables 46th-order optical nonlinearity
09:10-09:30 <b>KL-58: Li WU</b> Nankai University Novel mechanoluminescent materials with special structural units	09:10-09:30 <b>KL-59: Zhaofeng WANG</b> Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences	09:10-09:30 <b>KL-60: Xuhui XU</b> Kunming University of Science and Technology Optical properties and application development of glass-ceramics	09:10-09:30 <b>KL-61: Pengfei TIAN</b> Fudan University Micro-LED based ultrafast visible light communication

	Mechanoluminescence for visualized mechanics sensing			
09:30-09:45 <b>IL-51: Chongfeng GUO</b> Northwest University Halide double perovskite based phosphors and applications in multimode anti-counterfeiting	09:30-09:45 <b>IL-52: Ruichan LV</b> Xidian University Photonic biomaterials for imaging and sensing	09:30-09:45 <b>IL-53: Gemei CAI</b> Central South University Insight into composition, structure and luminescence properties of novel phosphates	09:30-09:45 <b>IL-54: Hongjian FENG</b> Northwest University Energetic ion beam improved optoelectronic materials and devices and interactions	
09:45-10:00 <b>IL-55: Zhenghui WU</b> Henan University Synthesis of Cd/Pb-free core-shell quantum dot and application in QLED	09:45-10:00 <b>IL-56: Jianle ZHUANG</b> South China Agricultural University When carbon dots meet rare earth	09:45-10:00 <b>IL-57: Xinyu YE</b> Jiangxi University of Science and Technology Study on Cr <sup>3+</sup> doped fluoride phosphors with broadband and efficient near-infrared emission	09:45-10:00 <b>IL-58: Yuanzheng LI</b> Northeast Normal University Unique C-exciton dynamics in monolayer transition metal dichalcogenides	
COFFEE BREAK 10:00-10:15				
CHAIR: Chunxiang XU, Yizheng JIN,	CHAIR: Ling HUANG, Sanyang HAN.	CHAIR: Weidong ZHUANG, Bomogwomi SAMMYNAIKEN	CHAIR: Tierui ZHANG,	
Li WU	Zhaofeng WANG	Xuhui XU	Qiuqiang ZHAN, Pengfei TIAN	
Li WU 10:15-10:35 KL-62: Gaoling YANG, Haizheng ZHONG Beijing Institute of Technology In-situ fabricated perovskite quantum dots for light emitting applications	Zhaofeng WANG         10:15-10:35         KL-63: Yang LI         Guangzhou Medical University         Defect engineering and control to afterglow	10:15-10:35 <b>KL-64: Youxuan ZHENG</b> Nanjing University Circularly polarized photoluminescence and electroluminescence of some chiral materials	10:15-10:35 <b>KL-65: Qi CHEN</b> Beijing Institute of Technology Heterogeneity in halide perovskite materials and devices	

10:55-11:15 <b>KL-70: Guanjun XIAO</b> Jilin University Metal halide perovskites and derivatives at high pressure	10:55-11:15 <b>KL-71: Zia ur REHMAN</b> Quaid-i-Azam University, Pakistan New promising anticancer materials	10:55-11:15 <b>KL-72: Hongwu ZHANG</b> Ludong University Different luminescent sensors based on shallow-trap persistent luminescence	10:55-11:15 <b>KL-73: Jun XU</b> Nankai University Solid-state NMR investigations of luminescent materials	
11:15-11:35 <b>KL-74: Amitava PATRA</b> Indian Association for the Cultivation of Science, Institute of Nano Science and Technology, India The implication of ultrafast carrier relaxation of nanomaterials on light harvesting	11:15-11:35 <b>KL-75: Feng WANG</b> City University of Hong Kong Exploring the host effects on lanthanide luminescence	11:15-11:35 <b>KL-76: Zhiguo XIA</b> South China University of Technology Several design principles in inorganic near infared luminescence materials	11:15-11:35 <b>KL-77: Zhiwen JIN</b> Lanzhou University Low-dimensional metal halide scintillators for high-sensitive X-ray detection and flexible high-resolution imaging	
11:35-11:50 <b>IL-59: Dengfeng PENG</b> Shenzhen University Mechanoluminescence of doped semiconductors for advanced lighting and sensing applications	11:35-11:50 <b>IL-60: Yibo CHEN</b> Guangzhou University Traps manipulation in zinc gallate spinel phosphors for advanced thermal-responsive luminescence	11:35-11:55 <b>KL-78: Yanlin SONG</b> Institute of Chemistry, Chinese Academy of Sciences Green printing technology for fabricating optical/electrical devices	11:35-11:55 <b>KL-79: Xuyong YANG</b> Shanghai University Quantum dos/perovskite-based light- emitting devices	
11:50-12:05 <b>IL-61: Xusheng QIAO</b> Zhejiang University Monodisperse CaAI <sub>12</sub> O <sub>19</sub> :Mn <sup>4+</sup> microspherical phosphors through a fast sol-gel route	11:50-12:05 <b>IL-62: Yong FAN</b> Fudan University Lanthanide-based NIR-II fluorescent probes for in vivo high-contrast multiplexed imaging and detection	11:55-12:10 <b>IL-63: Yichao WANG</b> Dalian Maritime University Defect engineering in a Eu <sup>2+</sup> -doped $\beta$ -Al <sub>2</sub> O <sub>3</sub> structure blue phosphor and its controllable zero-thermal quenching luminescence	11:55-12:10 <b>IL-64: Lei WANG</b> Hefei University of Technology Theoretical research on the ground state of 3d transition metal ion and their charge transition tendencies in inorganic compounds	
LUNCH 12:10-14:00				

## Aug. 2, P.M.

MEETING ROOM		VENUE COORDINATION: Zhengyan ZHAO, 18153670362, zhaozhy@lzu.edu.cn Tianrong LI, 13919464056, litr@lzu.edu.cn	
		CHAIR: Ru-Shi LIU, Shilie PAN, Fiorenzo VETRONE	
14:00-14:25	PL-23: Tetsuhiko ISOBE Keio University, Japan	Quantum dot films of CsPbCl <sub>3</sub> : Mn <sup>2+</sup> , Er <sup>3+</sup> and CuGaS <sub>2</sub> /ZnS for luminescent down-shifter and luminescent solar concentrator in single-crystalline silicon solar module	
14:25:14:50	PL-24: Dongfeng XUE Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences	Luminescence of magic-sized cluster materials: multiscale accurate color rendering of organic-inorganic metal halide perovskite	
14:50-15:15	PL-25: Dayong JIN University of Technology Sydney, Australia	Upconversion nanosystems for nanophotonics and biophotonics applications	
15:15-15:40	PL-26: Wai-Yeung WONG The Hong Kong Polytechnic University	Recent advances on NIR-emitting metallophosphors	
COFFEE BREAK 15:40-15:55			
		CHAIR: Tetsuhiko ISOBE, Dongfeng XUE, Wai-Yeung WONG	
15:55-16:20	PL-27: Ru-Shi LIU Taiwan University	Phosphor-converted light-emitting diodes for plant growth	
16:20-16:45	PL-28: Shilie PAN Xinjiang Technical Institute of Physics and Chemistry, Chinese Academy of Sciences	Fluorooxoborates: novel candidates for deep-UV nonlinear optical materials	
16:45-17:10	PL-29: Bin GONG Qiandong Rare Earth Group Co., Ltd	Domestic industrialization development of scintillation materials	
17:10-17:50	AWARDING CEREMONY (Ru-Shi LIU) CLOSING CEREMONY & INVITATION TO NEXT ( SPEAKER: Andries MEIJERINK, Chun Che LIN, Yuhus HOST: Deyin WANG )	PHOSPHOR SAFARI a WANG;	

## **C. POSTER LIST**

NUMBER	NAME	AFFILIATION	TITLE
PP-01	Guojun ZHENG	Zhejiang University	Glass-crystallized luminescence translucent ceramics toward high-performance broadband NIR LEDs
PP-02	Shaobing WU	Shenzhen University	Electroluminescence properties of ZnO nanorod array heterojunction LED via decoration of Au nanoparticles
PP-03	Guojian CHEN	Ningbo University	Synthesis and luminescence properties of Ce $^{3+}$ /Eu $^{2+}$ -codoped Ca $_8$ Zn(SiO $_4$ ) $_4$ Cl $_2$ phosphors for versatile applications
PP-04	Zhongfei MOU	Guangdong University of Technology	Study on the application of divalent europium doped inorganic luminescent materials in lighting display
PP-05	Xiaoxuan GUO	Sun Yat-sen University	Laser speckle reduction via TiO2-sapphire composite rotating wheel in laser projection
PP-06	Nan YANG	Sun Yat-sen University	Eu <sup>3+</sup> -activated red phosphor with a novel one-dimensional chain structure for near-UV based WLEDs
PP-07	Zhuo Ll	Sun Yat-sen University	Sb <sup>3+</sup> /Te <sup>4+</sup> co-doped lead-free double perovskites with tunable dual-emission for white light emitting diodes
PP-08	Zebin LI	Lanzhou University	Enhanced crystallinity and thermal stability of Ba <sup>2+</sup> and Al <sup>3+</sup> -O <sup>2-</sup> co-substituted Sr <sub>2</sub> Si <sub>5</sub> N <sub>8</sub> :Eu <sup>2+</sup>
PP-09	Rongyi KUANG	Sun Yat-sen University	A simple and generic post-treatment strategy for highly efficient Cr <sup>3+</sup> -activated broadband NIR emitting phosphors for high-power NIR light sources
PP-10	Simin GU	Sun Yat-sen University	Lead-free perovskite variant $Rb_2SnCl_6$ : Te based phosphor-sapphire composite for high-power laser-driven lighting
PP-11	Ziwang ZHANG	Sun Yat-sen University	Photoluminescent properties and efficient energy transfer of a novel Ce <sup>3+</sup> -Tb <sup>3+</sup> co-doping polyborate phosphor
PP-12	Yingyuan CHEN	Sun Yat-sen University	Novel $Mn^{4+}$ -activated fluoride red phosphor $Cs_{30}(Nb_2O_2F_9)_9(OH)_3 \cdot H_2O:Mn^{4+}$ with good waterproof stability for WLEDs
PP-13	Junhao Ll	Institute of Resource Utilization and Rare Earth Development, Guangdong Academy of Sciences	Realization of high color rendering white light in ScCaOBO <sub>3</sub>
PP-14	Chaoyang MA	Songshan Lake Materials Laboratory	Ligand-free CsPbBr <sub>3</sub> perovskite quantum dots in silica-aerogel composites with enhanced stability

PP-15	Tongtong XUAN	Xiamen University	Lead halide perovskite quantum dots for Mini-LEDs	
PP-16	Jindong CAO	University of Science and Technology Beijing	Broad photoluminescence of zero dimensional organic-inorganic hybrid halides	
PP-17	Na WANG	University of Science and Technology Beijing	Efficient narrow-band green light emitting hybrid halides for wide color gamut display	
PP-18	Yabing WU	Hefei University of Technology	High quantum efficiency red phosphor $K_2TiF_6:Mn^{4+}$ and its surface modification to resistance moisture	
PP-19	Yunfeng WANG	Nanyang Institute Of Technology	The confirmation of second-phase induced fluorescence quenching in non-equivalent substituted red phosphors	
PP-20	Chao LI	Henan University	High-performance ultra-narrow-band green-emitting phosphor LaMgAI <sub>11</sub> O <sub>19</sub> :Mn <sup>2+</sup> for wide color-gamut WLEDs backlight display	
PP-21	Wen-Tse Huang	Taiwan University	Ultra-broadband near-infrared emission CuInS <sub>2</sub> /ZnS quantum dots for the theranostic applications of mini light-emitting diodes	
PP-22	Hongxin ZHANG	Fudan University	In vivo multiplexing by Er <sup>3+</sup> doped nanocrystals	
PP-23	Youkui XU	Lanzhou University	Two-dimensional BA <sub>2</sub> PbBr <sub>4</sub> -based wafer for X-rays imaging application	
PP-24	Xiangyu WANG	Civil Aviation University of China	Light-heat and light-light dual-controlled upconversion luminescence and photochromic processes in Er-activated Bi <sub>7</sub> Ti <sub>4</sub> NbO <sub>21</sub> for optical information storage	
PP-25	Tonghua WAN	Guangdong University of Technology	Functionalized upconversion nanoparticles based turn-on aptasensor for highly sensitive and selective detection of antibiotics	
PP-26	Yue GUO	Nanjing Tech University	The red upconversion luminescence of KZnF3:Yb <sup>3+</sup> /Er <sup>3+</sup> for temperature sensing	
PP-27	Zuobin TANG	Xi'an University of Architecture and Technology	Eu <sup>2+</sup> -doped ultra-broadband VIS-NIR luminescence materials	
PP-28	Huibin ZHENG	Anyang Institute of Technology	Metal-free carbon nitride with near-unity quantum yield for multiple applications	
PP-29	Koyo WASHIO	Keio University, Japan	Improved photoluminescence properties of surface-modified carbon dots in fluoropolymer films	
PP-30	Rika KATAKAMI	Keio University, Japan	Synthesis of carbon quantum dots with narrow-bandwidth red fluorescence	
PP-31	Kuan-Chun CHEN	Taiwan University	Chemical and mechanical pressure-induced photoluminescence tuning via structural evolution and hydrostatic pressure	
PP-32	Fan Ll	Northeastern University	EDTA-promoted aliovalent $Eu^{3+}$ doping of $Sr_5(PO4)_3F$ apatite, growth behavior and luminescence	

PP-33	Junqing XIAHOU	Northeastern University	Lattice-site engineering in ZnGa <sub>2</sub> O <sub>4</sub> :Cr <sup>3+</sup> through Li <sup>+</sup> doping for dynamic luminescence and advanced optical anti-counterfeiting	
PP-34	Jinsheng LIAO	Jiangxi University of Science and Technology	Thermally boosted upconversion and downshifting luminescence in $Sc_2(MoO_4)_3$ :Yb/Er with two-dimensional negative thermal expansion	
PP-35	Jinru ZHOU	Chongqing University	Energy transfer and pressure-driven color tuning for potential applications in LEDs and pressure sensors	
PP-36	Jiapeng WU	Lanzhou University	Downconverting and upconverting Er <sup>3+</sup> –Yb <sup>3+</sup> luminescent materials for luminescence thermometry	
PP-37	Yan ZHOU	Chongqing University	Energy transfer and pressure-driven color tuning for potential applications in LEDs and pressure sensors	
PP-38	Quanfeng LI	Sun Yat-sen University	Luminescence and energy transfer dynamics of Ce <sup>3+</sup> , Eu <sup>2+</sup> co-doped Ba <sub>2</sub> Mg(BO <sub>3</sub> ) <sub>2</sub> materials for potential anti-counterfeiting applications	
PP-39	Donghao WEN	Sun Yat-sen University	VUV-UV-vis photoluminescence, X-ray radioluminescence and energy transfer dynamics of Ce $^{3+}$ and Eu $^{2+}$ in Sr_2MgSi_2O7	
PP-40	Junyu HONG	Sun Yat-sen University	Dual-mode chromatic electrophoretic display: a prospective technology based on fluorescent electrophoretic particles	
PP-41	Yiyi OU	Sun Yat-sen University	Site occupancy and luminescence in Sr <sub>4</sub> Al <sub>14</sub> O <sub>25</sub> :Ce <sup>3+</sup> phosphors	
PP-42	Tianliang ZHOU	Xiamen University	Luminescence properties of near infrared phosphors: Li <sub>3</sub> Sc <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> :Cr <sup>3+</sup> and Na <sub>3</sub> Sc <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> :Cr <sup>3+</sup>	
PP-43	Xiaodie ZHU	Kunming University of Science and Technology	A temporal and space anti-counterfeiting based on the four-modal luminescent $Ba_2Zr_2Si_3O_{12}$ phosphors	
PP-44	Tao JI	Kunming University of Science and Technology	Ce <sup>3+</sup> -doped yttrium aluminum garnet transparent ceramics for high-resolution X-ray imaging	
PP-45	Huanyu CHEN	Lanzhou University	Cesium lead halide nanocrystals based flexible X-ray imaging screen and visible dose rate indication on paper substrate	
PP-46	Qingpeng PENG	Kunming University of Science and Technology	Up-converted long persistent luminescence from CsPbBr <sub>3</sub> nanocrystal in glass	
PP-47	Lei SONG	Southeast University	Direct X-ray detector based on MAPbBr <sub>3</sub> FET structure	
PP-48	Fuchun NING	Lanzhou University	Growth and photoluminescence properties of Cs₄PbBr <sub>6</sub> prepared by one-step batch method	
PP-49	Yan GUAN	Peking University	Ultralong polymeric room temperature phosphorescence with high temperature resistance	

PP-50	Bibo LOU	Chongqing University of Posts and Telecommunications	Luminescence mechanism of Bi <sup>3+</sup> ions in perovskites: first principles studies
PP-51	Wei XIN	Northeast Normal University	Anisotropic photoelectric response of graphene oxide film high-speed structurized via femtosecond laser
PP-52	Chao GUO	Northwest Normal University	Photophysics in zero-dimensional potassium-doped cesium copper chloride $Cs_3Cu_2Cl_5$ nanosheets and its application for high-performance flexible X-ray detection
PP-53	Xu LI	Hebei University	Rare earth doped Ba <sub>4</sub> La <sub>6</sub> O(SiO <sub>4</sub> ) <sub>6</sub> phosphors excited by near ultraviolet
PP-54	Shilin JIN	Fujian Normal University	Compact ultrabroadband light-emitting diodes based on lanthanide-doped lead-free double perovskites
PP-55	Siyuan LI	Northeastern University, China	Magical polyhedral twist via chemical unit co-substitutionin LaAlO <sub>3</sub> :Mn <sup>4+</sup> to greatly enhance the zero phonon line for high-efficiency plant-growth LEDs
PP-56	Hang CHEN	Henan University	A new efficient blue phosphor with high thermal stability for lighting and optical pressure sensor applications



#### 虔东简介 COMPANY PROFILE





虔东稀土集团股份有限公司位于"稀土王国"——江西省赣州市,创建于1988年3月,公司建立了完整的科研、生产、检测体系,主要从事 稀土基础材料、稀土功能材料、及应用产品研发与生产经营的高新技术企业,具有国际先进水平的稀土化合物、稀土金属、稀土合金、稀土功能材 料、稀土应用产品、稀土加工装备、稀土分析检测。经过30多年的发展,现已发展成为我国稀土行业重点骨干企业之一,现有职工2200余人。公 司以"创造价值、成就希望、奉献社会"为宗旨,以"勤奋、务实、创新、发展"为精神,凭借在行业领先的技术水平及市场拓展能力,面向全球 稀土市场提供高性能增值产品和多元化解决方案,力争为社会发展提供最好的稀土应用产品和服务!

Founded in March 1988, Qiandong Rare Earth Group Co., Ltd. is located in Ganzhou City, Jiangxi Province, the "kingdom of rare earth". The company has established a complete scientific research, production and testing system, mainly engaged in rare earth basic materials, functional materials, and application products research, development and production and management of high-tech enterprises. The company has international advanced level of rare earth compounds, metals, alloys, functional materials, application products, processing equipment, rare earth analysis and testing products. After more than 30 years of development, it has developed into one of the key enterprises in China's rare earth industry. Strive to become a global rare earth market to provide high-performance value-added products and diversified solutions, strive to become one of the domestic leading rare earth application enterprises and manufacturers!

### 虔东大事记 COMPANY MILESTONES





### 产品及服务 PRODUCTS AND SERVICES





稀土金属 RE Metal Smelting





稀土化合物 Rare Earth Compound



稀土合金 Rare Earth Alloys 钐钴磁材 SmCo Magnetic Materials





激光晶体 Laser Crystal

陶瓷材料 Ceramics Material

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4

### 企业荣誉 Enterprise honor

### 品质保证 Quality assurance

<b>国家企业技术中心</b> National Centre for Exception Technology NRXX M 成本 所 社 都 NRXX M 大 2 M NRX M 2 D M	国家技术创新示范企业 <sup>工业和信息化部</sup>			
国家企业技术中心	国家技术创新示范企业			Augusta Andrew Marian
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业务联系方式: 涂剑,tujian@jxgqd.com Business Contact: Tu Jian,tujian@jxgqd.com

#### LTTL-3DS型 多功能缺陷荧光光谱仪 Multifunction Defects Fluorescence Spectrum

LTTL-3DS型多功能缺陷荧光光谱仪是测量固体发光材料三维光谱的测量装置。热释光三维发光谱,即包含温度和波长与发光强度的三维图谱的测定有助于识别发光中心的类型和了解相关的缺陷结构,为了解热释光的发光机制研究提供更加丰富的参数。可增加激发光源,包括X射线、紫外光源和红外光源等,以及制冷型高灵敏稳定性探头以提高三维光谱品质,也可以测量光激发下的材料发光谱。

仪器可以实现低温度(100K)到高温(773K)的温度控制,能够对发光材料中的浅能级 陷阱进行分析,特别适合闪烁体、长余辉材料等发光材料的研究工作。

#### 实现多种测量模式:

- 热释光三维光谱
- •热释光发光曲线
- 光释光三维光谱
- 光释光发光曲线
- 辐射发光光谱测量
- •余辉衰减光谱测量
- •X射线荧光谱测量



#### SL08型 热释光测量仪 TL&OSL Reader

通过程序自行设定辐照、激发以及测量等功能,

#### 实现多种测量模式:

- •热释光发光曲线
- •光释光发光曲线
- •余辉衰减曲线测量







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