

## TUESDAY 24<sup>TH</sup> SEPTEMBER 2024

**12:30** Welcome lunch & registration

**14:00** Official Opening - **Mathieu Allix, Michael J. Pitcher, Laurent Cormier & Alberto José Fernández Carrión - Sophie Gabillet** (LE STUDIUM General Secretary)

### SESSION 1 - Chairmen: Laurent Cormier & Mathieu Allix

**14:30 Thomas Höche** - Microstructure of Glasses and Glass Ceramics – What Can We Expect From Advanced Methods?

**15:00 Olga Dymshits** - Iron-doped magnesium aluminosilicate transparent glass-ceramics nucleated by TiO<sub>2</sub> and ZrO<sub>2</sub>: Mg-petalite or spinel nanocrystals? Competing crystallization mechanisms

**15:30 Euan Duncan** - Glass – Crystallisation and Structural Characterisation of a New Aluminosilicate by XRD and NMR

**15:50** Flash Posters Session 1

**16:10** Coffee break & Posters session

### SESSION 2 - Chair(wo)men: Ina Mitra & Alessio Zandonà

**16:40 Danilo Di Genova** - Crystallization in natural melts: nanoscale approach to volcanic eruptions and unconventional ways to derive melt viscosity

**17:10 Joachim Deubener** - Overheating-dependent undercooling of a lithium disilicate melt

**17:30 Leton Saha** - Molecular dynamics studies of interfacial energy in alkali disilicate glass-crystal

**18:00** Guided visit of the city centre (*departure in front of the Hotel Dupanloup*)

**19:30** Wine & Cheese cocktail - Hôtel Dupanloup

## WEDNESDAY 25<sup>TH</sup> SEPTEMBER 2024

**08:45** Welcome coffee

### SESSION 3 - Chairmen: Jianrong Qiu & Alberto José Fernández Carrión

**09:00 Tsuyoshi Honma** - Sodium ion conductive glass-ceramics processed by laser-based powder bed fusion technology

**09:30 Marcelo Nalin** - Gallium and Aluminum rare earth garnets prepared from glaucrystallization in Chalcogenide glasses

**09:50 Sébastien Chenu** - Transparent tellurite ceramics obtained by full crystallization of glass

**10:10** Flash Posters Session 2

**10:30** Coffee break & Posters session

### SESSION 4 - Chairmen: Danilo Di Genova & Thomas Höche

**11:00 Cécile Genevois** - In-situ temperature experiments in a Transmission Electron Microscope (TEM) : insights into crystallization mechanisms occurring in glasses

**11:30 Benedict Hagel** - Growth and dissolution rates of diopside crystals around the liquidus temperature studied by high-temperature observation

**11:50 Joséphine Rezkallah** - Observing the crystallization of YAG glass in situ by high temperature TEM

**12:10 Zhang Le** - Novel red glass ceramics and MAS: Eu-YAG: Ce composite phosphor converters with excellent thermal performance and enhanced color rendering index for high-power white LEDs

**12:30** Lunch

### SESSION 5 - Chair(wo)men: Cécile Genevois & Stefan Reinsch

**14:00 Xianghua Zhang** - Controlled crystallization in Chalcogenide glasses

**14:30 Omar Abou El Kheir** - Unravelling the crystallization kinetics of the Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub> phase change compound with a machine-learned interatomic potential

**14:50 Zhiping Xu** - Exploring Glass Crystallization Kinetics by Phase Field Modeling

**15:10 David Simeone** - Modelling the nucleation and growth process using the PF approach: application to FeCr

**15:30 Jong Heo** - Crystallization of PbS Quantum Dots in Glass Using Co<sup>2+</sup> Light Absorption

**16:00** Coffee break & Posters session

### SESSION 6 - Chair(wo)men: María Jesus Pascual Francisco & Thomas Höche

**16:30 Eduardo Bellini Ferreira** - Evolution of diffusion zone around crystals growing in a combeite stoichiometric glass and its effect on the local nucleation rate

**17:00 Robert Hill** - Cabbage Head Barium Mica Glass-Ceramics Part 1

**17:20 Maher Rashwan** - Cabbage Head Barium Mica Glass-Ceramics Part 2

**19:30** TC7 dinner - L'Etage

**19:30** Students Night - Les Dix Fûts (*for students only*)

## THURSDAY 26<sup>TH</sup> SEPTEMBER 2024

**09:00** Welcome coffee

### SESSION 7 - Chairmen: Xianghua Zhang & Marcelo Nalin

**09:20 Jianrong Qiu** - Fs laser induced space-selective precipitation of nanocrystals in glass

**09:50 Maxime Cavillon** - 3D localized crystallization by femtosecond laser in glass – an exciting way to enhance thermal stability for photonic devices

**10:10 François Goutaland** - UV laser-induced melting and crystallisation of silver or cobalt-doped soda-lime glass

**10:30** Coffee break & Posters session

### SESSION 8: Chairmen: Stefan Reinsch & Tsuyoshi Honma

**11:00 Kenji Shinozaki** - Glass Structure Design for Ultrafast Nanocrystallization: Toward Oxyfluoride Glass-Ceramics Devices

**11:30 Frederic Caupin** - Ultrafast experiments on crystallization in supercooled atomic liquids and comparison with simulations

**11:50 Kei Maeda** - Ductile behavior of glass-ceramics by ball indentation

**12:10 Renaud Valois** - Development of new transparent ceramics through the Gd<sub>3+x</sub>Nb<sub>1-x</sub>O<sub>7-x</sub> solid solution for emission in the 1.7 – 2.7 μm window

**12:30** Lunch

### SESSION 9 - Chair(wo)men: Ina Mitra & Joachim Deubener

**14:00 Stefan Reinsch** - Oriented Surface Crystallization in Glasses

**14:30 Jean-René Duclère** - New bismuth borotellurite glass-ceramics: multiple evidences for chemical demixtion phenomena occurring concomitantly with the partial crystallization

**14:50 Markus Rampf** - Internal nucleation of Li<sub>2</sub>Si<sub>2</sub>O<sub>5</sub> glass-ceramics using SnO<sub>2</sub> as nucleating agent

**15:10 Louisiane Verger** - Crystallization in sulfur-based glasses for solid state electrolytes

**15:30 Silvia Santagneli** - Understanding the Evolution of the Structure and Electrical Properties of glass to glass ceramics NASICON-Type in the systems: Li<sub>1+x</sub>Al<sub>x</sub>Sn<sub>y</sub>Ge<sub>2-(x+y)</sub>(PO<sub>4</sub>)<sub>3</sub> and Li<sub>1+x</sub>Al<sub>x</sub>Sc<sub>y</sub>Ge<sub>2-(x+y)</sub>(PO<sub>4</sub>)<sub>3</sub>

**16:00** Coffee break & Posters session

**SESSION 10 - Chairmen: Markus Rampf & Eduardo Bellini Ferreira**

**16:30 Alessio Zandonà** - Walking a fine line: glass formation vs. seed formation in TiO<sub>2</sub>-containing (alumino) silicate melts

**17:00 Ina Mitra** - Laboratory techniques in material development of industrial research and development - Example: Investigating the crystallization of LAS-Glass-Ceramics

**17:20 Beatriz Paiva da Fonseca** - Structure and thermal expansion of (Zn,Mg)-Qz-ss crystallized from sol-gel glasses

**17:40** Free time

**19:15** Departure by bus to the Domaine de La Fontaine, meeting point at the Hôtel Dupanloup

**19:45** Gala dinner - Domaine de La Fontaine (The bus will drive you back to the cathedrale after the dinner)

## FRIDAY 27<sup>TH</sup> SEPTEMBER 2024

**09:00** Welcome coffee

**SESSION 11 - Chairmen: Kenji Shinozaki & Xianghua Zhang**

**09:20 Maria Jesus Pascual Francisco** - Alternative processing and enhanced properties of photonic glass-ceramics

**09:50 Alizée Deslandes** - Impact of rare-earth doping on SrF<sub>2</sub> crystal size in novel oxyfluoride germanate matrix

**10:10 Laure Chomat** - Evidence of amorphous phase separation in sodium borosilicate glass and its influence on fracture properties

**10:30** Coffee break & Posters session

**SESSION 12 - Chairmen: Tsuyoshi Honma & Michael J. Pitcher**

**11:00 John Mc Cloy** - Structure and chemistry of volatile anions in crystals glasses, & melts: sulfate, fluoride, chloride

**11:30 Christina Baslari** - Development of functional optical layers by integrating YAG:Ce into 316L stainless steel components

**11:50 Jean-Gabriel Bégos** - Development of glass formulations for sealing applications in High-Temperature steam Electrolyzer

**12:10** Student awards

**12:20** Conclusion

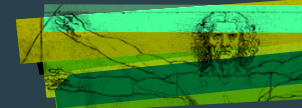
**12:30** Closing lunch

LE STUDIUM

CONFERENCES

ORLÉANS | 2024

PROGRAMME



24-27 September 2024

# 13th International Symposium on Crystallization in Glasses and Liquids

## LOCATION

Hôtel Dupanloup  
1, rue Dupanloup  
45000 Orléans - FR



## PROGRAMME - INSCRIPTION

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