



**International Workshop on Glass Science  
16-17 November 2023  
Institute of Research on Ceramics (IRCER) / XLIM institute  
European Ceramic Center, Lecture Hall 4  
Limoges, France**

**Organizing Committee:** Dr. Philippe THOMAS, CNRS, France,

Pr. Raouf EL-MALLAWANY, Menoufia University, Egypt

Pr. Jean René DUCLERE, Limoges University, France

**Number of speakers:**

- 11 from both IRCER and XLIM research institutes
- 7 from French academic research labs (CEMHTI, ICMCB, ISM, ICB, ISCR)
- 1 invited professor from Menoufia University (Egypt)

**Workshop sponsored**

**by the LabEX  $\Sigma$ -LIM & the graduate school “Ceramics & ICT”**



## Detailed Program

Thursday 16<sup>th</sup> of November PM

<b>13:50 – 14:00: Opening message</b> by Philippe Thomas, Raouf El-Mallawany & Jean René Duclère	
<b>Session 1: Applications (optical fibers, nonlinear optics, lasers)</b>	<b>14:00 – 14:30 (Lecture Hall 4 – CEC)</b> <b>Vincent Couderc (XLIM - Limoges)</b> <i>Nonlinear optics in multimode fibers for multiphoton imaging and CARS spectroscopy</i>
	<b>14:30 – 15:00 (online presentation)</b> <b>Frédéric Smektala (ICB – Dijon)</b> <i>Latest developments in tellurite optical fibers: from glass purification to nonlinear optical properties and hybrid waveguides</i>
	<b>15:00 – 15:30 (Lecture Hall 4 – CEC)</b> <b>Frédéric Gérôme &amp; Jenny Jouin (XLIM/IRCER – Limoges)</b> <i>Development of ceramic coating for hollow-core photonic crystal fibers</i>
<b>15:30 – 16:00</b> <b>Coffee break</b>	
<b>Session 1: Applications (optical fibers, nonlinear optics, lasers)</b>	<b>16:00 – 16:30 (Lecture Hall 4 – CEC)</b> <b>Georges Humbert (XLIM - Limoges)</b> <i>Biosensing platforms based on nano-functionalized opto-fluidic fibers</i>
	<b>16:30 – 17:00 (online presentation)</b> <b>Johann Troles (ISCR – Rennes)</b> <i>Mid-infrared fibers made by additive manufacturing of chalcogenide glasses</i>
	<b>17:00 – 17:30 (Lecture Hall 4 – CEC)</b> <b>Sébastien Février (XLIM - Limoges)</b> <i>Optical fibers enable frequency conversion from the deep ultraviolet to the mid-infrared</i>
<b>Afterwork scientific discussions</b>	

## Friday 17<sup>th</sup> of November AM

<p><b>Session 2: New materials and processes</b></p>	<p><b>08:45 – 09:15 (Lecture Hall 4 – CEC)</b> <b>Raouf El-Mallawany (Menoufia University, Egypt)</b> <i>Advanced Tellurite Glasses</i></p> <p><b>09:15 – 10:00 (online presentation)</b> <b>Mathieu Allix &amp; Michael Pitcher (CEMHTI - Orléans)</b> <i>New out-of-equilibrium materials by glass/melt crystallisation</i></p> <p><b>10:00 – 10:30 (Lecture Hall 4 – CEC)</b> <b>Romain Trihan (IRCER – Limoges)</b> <i>Additive Manufacturing of Silica Glass</i></p>
<p><b>10:30 – 11:00</b> <b>Coffee break</b></p>	
<p><b>Session 2: New materials and processes</b></p>	<p><b>11:00 – 11:30 (online presentation)</b> <b>Florian Calzavara (ICMCB – Bordeaux)</b> <i>New gallogermanate based glasses for transparent infrared optical fibers</i></p> <p><b>11:30 – 12:00 (Lecture Hall 4 – CEC)</b> <b>Romain Dauliat (XLIM – Limoges)</b> <i>Adoption of a genuine powder suspension doping technique to scale the average power of silica fiber lasers</i></p> <p><b>12:00 – 12:30 (Lecture Hall 4 – CEC)</b> <b>Jean René Duclère (IRCER – Limoges)</b> <i>New borotellurite glass-ceramics</i></p>
<p><b>Lunch: 12:30 – 14:00</b></p>	

## Friday 17<sup>th</sup> of November PM

<p><b>Session 3: Structural &amp; microstructural characterizations, imaging, atomic scale modeling</b></p>	<p><b>14:00 – 14:30 (Lecture Hall 4 – CEC)</b> <b>Assil Bouzid (IRCER - Limoges)</b> <i>Atomic scale modeling of TeO<sub>2</sub>-based oxide glasses</i></p> <p><b>14:30 – 15:00 (online presentation)</b> <b>Cécile Genevois (CEMHTI, Orléans)</b> <i>The crystallization process of gel-derived SiO<sub>2</sub>-TiO<sub>2</sub> amorphous nanobeads followed by an in-situ high temperature study</i></p> <p><b>15:00 – 15:30 (Lecture Hall 4 – CEC)</b> <b>Maggy Colas (IRCER - Limoges)</b> <i>Raman imaging as a tool for characterization for disordered materials</i></p>
<p><b>15:30 – 16:00</b> <b>Coffee break</b></p>	
<p><b>Session 3: Structural &amp; microstructural characterizations, imaging, atomic scale modeling</b></p>	<p><b>16:00 – 16:30 (online presentation)</b> <b>Marc Dussauze (ISM – Bordeaux)</b> <i>Multifunctional glassy surfaces managed by thermo-electrical processes</i></p> <p><b>16:30 – 17:00 (Lecture Hall 4 – CEC)</b> <b>Olivier Noguera (IRCER - Limoges)</b> <i>Ab-initio study of electronic structures and optical properties of tellurium oxide based materials: periodic approach versus cluster approach</i></p>
<p><b>17:00 – 17:10 Closing message</b> by Philippe Thomas, Raouf El-Mallawany &amp; Jean René Duclère</p>	