TWISMA Project Newsletter 2

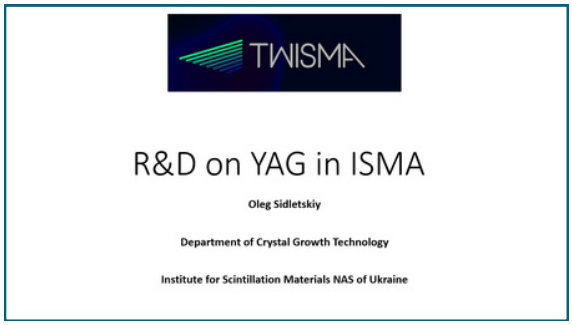
Foreword

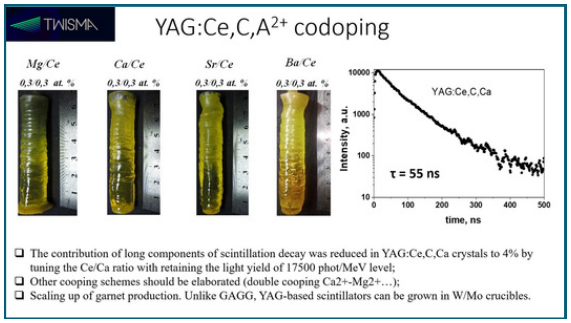
Welcome to the second edition of the **TWISMA** newsletter.

TWISMA is a Horizon Europe Twinning project funded by the European Union, bringing together the Institute for Scintillation Materials (ISMA), CERN, and the Institute of Light and Matter (ILM). The project aims to strengthen scientific excellence and innovation capacity in the area of advanced scintillation materials and their use in innovative calorimeters for high-energy physics.
By combining research collaboration with knowledge exchange and capacity-building activities, TWISMA supports both scientific advancement and long-term institutional development.
This issue looks back at the project's second year and highlights the main activities, exchanges, and achievements that have shaped TWISMA's progress so far.

Research progress presented at CERN

TWISMA research was presented at a CERN online kick-off meeting of Picocal WP3 focused on scintillating fibres for the Phase II upgrade of the LHCb calorimeter. Prof. Oleg Sidletskiy shared recent results on fast-timing YAG:Ce scintillators developed within the project.
The presentation highlighted the promising performance of dual co-doped YAG:Ce crystals and their cost-effective production potential, underlining their relevance for future high-energy physics applications.

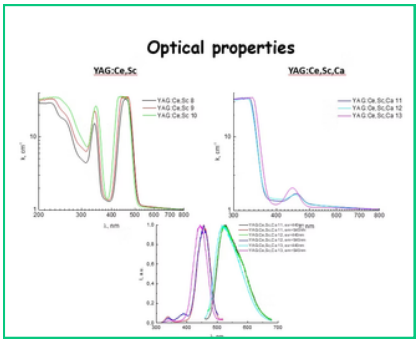




Research progress shared at the Crystal Clear Collaboration meeting

At the 81st Crystal Clear Collaboration meeting held in Prague on 25 April 2024, Dr. Iaroslav Gerasymov presented recent TWISMA results online. The presentation focused on progress in the engineering of multicomponent garnets with improved time resolution.

The report attracted strong interest from the audience and led to an active discussion, reflecting the relevance of TWISMA research within the scientific community.

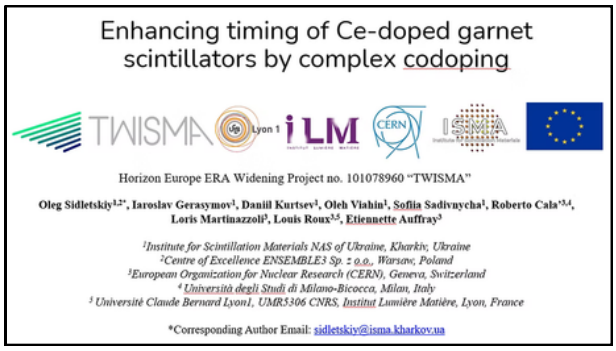


Strong presence at SCINT 2024 and Summer School

The TWISMA team actively participated in SCINT 2024, held in Milan, Italy, on 8–12 July 2024.
A special TWISMA session opened the conference programme, featuring presentations by project partners on recent progress in scintillation materials and their applications in high-energy physics.

TWISMA was also represented in the Summer School preceding the conference, where partners from ISMA, CERN, and ILM delivered lectures on scintillation processes, detector applications, and crystal growth technologies. The event provided strong visibility for the project and valuable opportunities for scientific exchange.

TWISMA at IEEE NSS/MIC RTSD 2024



Enhancing timing of Ce-doped garnet scintillators by complex codoping

Horizon Europe ERA Widening Project no. 101078960 "TWISMA"

Oleg Sidletskiy[1,2*], Iaroslav Gerasymov[1], Daniil Kurtsev[1], Oleh Vlahin[1], Sofiia Sadivnycha[1], Roberto Cala'[3,4], Loris Martinazzoli[3], Louis Roux[3,5], Etiennette Auffray[3]

[1]Institute for Scintillation Materials NAS of Ukraine, Kharkiv, Ukraine
[2]Centre of Excellence ENSEMBLE3 Sp. z o.o., Warsaw, Poland
[3]European Organization for Nuclear Research (CERN), Geneva, Switzerland
[4]Università degli Studi di Milano-Bicocca, Milan, Italy
[5]Université Claude Bernard Lyon1, UMR5306 CNRS, Institut Lumière Matière, Lyon, France

*Corresponding Author Email: sidletskiy@isma.kharkov.ua

TWISMA research was presented at the 2024 IEEE NSS/MIC RTSD Conference held in Tampa, Florida, from 26 October to 2 November 2024. The event is one of the leading international meetings in the field of radiation detection technologies.

During the conference, Prof. Oleg Sidletskiy presented recent TWISMA achievements in fast-timing scintillator crystals, with a focus on improving the timing performance of Ce-doped garnet scintillators through complex codoping.

From CERN meetings to major international conferences, TWISMA continues to share its research and connect with the wider scientific community. Visit the project website to read the full stories and follow the latest updates.

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TWISMA

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Project Coordinator
INSTITUTE FOR SCINTILLATION MATERIALS OF NATIONAL ACADEMY OF SCIENCES OF UKRAINE
Responsible person
Prof. Oleg Sidletskiy
Head of Department of Crystal Growth Technology