START Final Events

FINAL WORKSHOP

The START Solution: Thermoelectric Tetrahedrites from Secondary Raw Materials for Sustainable Energy Production from Waste Heat

Date: 19 May 2026 – Time: 9:15 AM to 5:30 PM CEST

Venue: Hotel Thon Brussels City Centre, Brussels, Belgium - Room Bergen

And hybrid

WORKSHOP OBJECTIVES:

START is a 4-year Horizon Europe project delivering a new EU ecosystem for sustainable thermoelectric materials based on mine wastes (tetrahedrites), to obtain devices for waste heat recovery, thus contributing to EU resilience, and energy and resource economy.

As May 2026 is the last month of the project, START organises a Final Workshop, that can practically be seen as a side event of the EIT RawMaterials Summit, and a Side Session inside the Summit itself.

In the Final Workshop on Tuesday 19th May, titled "***The START Solution: Thermoelectric Tetrahedrites from Secondary Raw Materials for Sustainable Energy Production from Waste Heat***", participants will get a thorough experience of the activities carried out within the project and the exploitable results. Speakers from the consortium will address the rationale of the project, how secondary minerals have been collected in several mine sites in Europe (from mine wastes), analysed and processed to concentrate the tetrahedrites; how the concentrates have been further treated and compositionally corrected by high energy ball milling to activate them for the subsequent U-FAST consolidation; the characterisation of the samples, the production of the thermoelectric device, and finally their assessment both in terms of performance and environmental impact. We will also explain what the START legacy activities in the field of thermoelectricity will be, in particular the plans for a Service Company and a START Alliance to foster the development of the Thermoelectric market in Europe. The agenda is enclosed below (times, speakers and speeches are subject to changes, please check regularly for possible updates).

The venue is the Thon Hotel, located close to the North Station (Gare du Nord) and beside the Rogier metro station, thus well connected to the airport and by train or metro also to the South Station (Gare du Midi). We also offer the possibility to join remotely.

The workshop is free of charge, but we require a previous registration as the space will be limited to about 90 participants on site. Please register here (**registration link**). In the last days, the possibility of joining in person is limited by availability, while joining online will be open until the last hours.

Take the opportunity to join also the EIT RawMaterials Summit, that will start its technical programme the next day! You will be able to take part in our second Final Event inside the Summit – see in the following pages!

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AGENDA of the workshop – All details subject to changes

9:15	9:25	Welcome	Organisers - LNEG / START
9:25	9:55	The START Project: from EU Mines to Sustainable TE Devices	Filipe Neves - LNEG / START Coordinator
9:55	10:25	Sustainable Raw Materials Sources from Mine Waste	Daniel Oliveira - LNEG
10:25	10:55	Enrichment of tetrahedrite-containing minerals	Stanislav Šoltés - Štátny geologický ústav Dionýza Štúra
10:55	11:25	Coffee break	-
11:25	11:55	High Energy Ball Milling of Synthetic and Natural Tetrahedrites	Alvise Bianchin - MBN Nanomateralia
11:55	12:25	Consolidation of Tetrahedrite-based Compositions	Marcin Rosiński - GeniCore
12:25	13:25	Lunch	-
13:25	13:55	Characterisation of Tetrahedrite-based Compositions	Patricia Carvalho - SINTEF
13:55	14:25	Mid-Temperature TH-based Devices for Heat Harvesting	Aniruddha Ray – Thermagy
14:25	14:55	Low-Temperature TH-based Devices for Heat Harvesting	Hao Yin - TEGnology
14:55	15:25	Coffee break	-
15:25	15:55	Sustainability of TH-based TE Materials and Devices	Eduardo Santos - 3Drivers
15:55	16:25	START's Legacy: The Alliance and the Service Company	Emese Karácsonyi - La Palma Research Centre
16:25	17:25	Round Table: An Industrial Thermoelectric European Association?	Moderator: Luis Lopes - La Palma Research Centre Panel: D. Crane (DTP Thermoelectrics) M. Den Heijer (Thermagy) E. Karácsonyi (LPRC) D. Narducci (University Milano Bicocca, European Thermoelectric Society) G. Roy (Thermo Power Systems)
17:25	17:30	Recap and End of Event	Filipe Neves - LNEG / START Coordinator

For any doubt or details, contact us (Filipe Neves f.neves@lneg.pt, Bruno Vicenzi bv@epma.com).

Read in the next pages about the second event!

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START Final Events

EIT RawMaterials Summit 2026 - START Side Session

Secondary Raw Materials for a Sustainable Thermoelectrics Ecosystem

Date: 20th May 2026 – Time: 11:45 to 12:45

Venue: The Egg Conference Centre, Brussels, Belgium, inside the EIT RawMaterials Summit

EVENT OBJECTIVES:

START is sponsoring the EIT RawMaterials Summit 2026 and will run a Side Session inside its technical programme.

The Summit is a prestigious and poignant event, where about a thousand attendees have high-level discussions on the topic of Raw Materials, with the participation of managers of important companies and startups, investors, specialists, representatives of the European and National institutions. Definitely a place to be if you are involved in the world of Raw Materials!

Held at The Egg Conference Centre, in the area of the Gare du Midi, its technical programme will start on Wednesday 20th May and will conclude on Thursday 21st. There will also be an opening reception in the evening of Tuesday 19th (after the end of START's Event at the Thon, so do not worry, you can join both!). You can find full details on the Summit in the event's website https://eitrmsummit.com/!

The Side Session dedicated to the START project, titled "***Secondary Raw Materials for a Sustainable Thermoelectrics Ecosystem***" will be on Wednesday 20th, from 11:45 to 12:45. In this session, and compared to the workshop on Tuesday 19th May, the focus will be more on the Raw Materials approach of the project.

START has, in fact, as one of its features that the thermoelectric materials developed are not, like most of the presently used commercial devices, based on tellurium, an element that is scarcely available, notably not in Europe, and almost entirely processed outside Europe. Rather, the materials are constituted of tetrahedrite, a naturally occurring copper sulphosalt mineral (basic composition $(Cu,Fe,Zn,Ag)_{12}Sb_4S_{13}$) that is available all over the world, Europe included, and normally discarded in mines (e.g. copper and silver mines) because it is considered a contaminant. START geology partners have collected about 1 ton of discarded samples in several mine sites in Europe, directly from mine wastes, that have been used throughout the project and finally used, after compositional adjustments, to produce thermoelectric devices. The project has thus developed a full ecosystem, from secondary raw materials to systems for the production of green energy (with the additional bonus of exploiting waste heat!). START also plans to foster the development of the Thermoelectric market in Europe with a Service Company and a START Alliance.

There will be four introductory speeches to succinctly explain all the main outcomes, and a final round table with selected panellists to discuss the importance of European mine wastes in the framework of the efforts to improve EU's resilience and independence from external sources of Critical Raw Materials.

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The participation to the session is clearly included in the entrance ticket to the EIT RawMaterials Summit, that must be acquired on the Summit's website previously mentioned. Please register there and meet us in Brussels, take the chance of joining our previous workshop to this high-level conference, essential for networking in this sector!

AGENDA of the workshop – All details subject to changes

The START Project: EU Mine Wastes for Sustainable TE Devices	Filipe Neves - LNEG / START Coordinator
Valorising European Mine Wastes	Daniel Oliveira - LNEG
Environmental Sustainability and Economic Feasibility of TE devices	Eduardo Santos - 3drivers
START's Legacy: The Alliance and the Service Company	Emese Karacsonyi - La Palma Research Centre
Round Table: Mine Wastes as a Pillar for Resilience	Moderator: Gracia Olivenza – ASGMI Panellists: I. Herraez Chamorro (Tecnicas Reunidas, PERMANET project) D. Oliveira (LNEG) D. Yilmaz (Institute for Energy Technology, REESOURCE Project) H. Yin (TEGnology)

For any doubt or details, contact us (Filipe Neves f.neves@lneg.pt, Bruno Vicenzi bv@epma.com).

For more information on START, consult **https://www.start-heproject.com/**.

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