

First Dissemination Report

Point of ContactFederica HauptInstitutionAMOE-mailhaupt@amo.de



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Authors	Federica Haupt (AMO)
Reviewer	Marco DeLuca (MCL), Piotr Cegielski (AMO)



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Abbreviations, Participant short names

Abbreviations

IoT Internet of Things

Participant short names

MCI	Materials Center Leoben Forschung GmbH
IVICL	
BUW	Bergische Universität Wuppertal
AMO	Gesellschaft für Angewandte Mikro- und Optoelektronik GmbH
UNINOVA	Uninova-Instituto de Desenvolvimento de Novas Tecnologias - Associacao
UB	Universitat de Barcelona
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Summary

This document summarizes the dissemination activities related to the project FOXES from the beginning of the project in October 2020, to December 2021 (M15).

In this early phase of the project, many dissemination activities have been on-hold or happened only on a reduced scale because of the limitations imposed by the pandemic and, even more importantly, because of the scarcity of new publishable results that is characteristic of the rump-up phase of a project. We expect a consistent increase of the dissemination activities in the second phase of the project, in parallel with the increase of the scientific output disclosable to the public, i.e. not subject to intellectual property right (IPR) issues.

1 Introduction

As described in Deliverable D8.2 (Dissemination Plan), the dissemination activities of the project FOXES are coordinated by AMO and performed with the active support of all partners. The overall goal is to raise the interest of the scientific community, as well as of European companies and policy makers, in the potential of FOXES technology as a sustainable way to power devices of the Internet of Things (IoT) and wearable devices.

The main communication channels identified for our dissemination activities are:

- Publications in relevant scientific and technical journals
- Project website
- Social media channels of the partner institutions (e.g. AMO LinkedIn channel, MCL Facebook channel)
- Press releases
- Presentations in influential international conferences
- Articles or guest posts on relevant magazines and newsletters
- Participation to research/industry workshops, networking meetings, consultation meetings and technical fairs.
- Project flyer and e-documents
- Preparation of policy notes
- Participation to general science events (e.g. "Girls' Day", "Engineer Academy", "Career days", "Open Lab days" or "Research night")
- Visits to R&D labs of European sensor companies
- Links with national and international initiatives in the field

Below an outline of the activities carried out in the first 15 months of the project.

1.1 Initial press release, project website and project flyer

- Already at the signing of the grant agreement (July 2020), we prepared and distributed an initial press release ("FOXES: developing a zero-emissions, portable energy supply for autonomous devices", <u>https://www.amo.de/blog/2020/07/23/foxes-developing-a-zero-emissions-portable-energy-supply-for-autonomous-devices/</u>), which was taken up by the following websites:
 - Website Material Center Leoben (27.07.2020) <u>https://www.mcl.at/en/presse-news-media/news/news/foxes-developing-a-zero-emission-portable-energy-supply-for-autonomous-devices/</u>
 - IEEE EDS German Chapter (27.07.2020)



- https://r8.ieee.org/germany-eds/foxes-development-of-an-emission-free-portable-energysupply-for-autonomous-devices/
- Website University of Barcelona (29.09.2020) <u>https://www.ub.edu/web/ub/ca/menu_eines/noticies/2020/09/029.html</u>
- Zuse Gemeinschaft (09.10.2020) https://www.zuse-gemeinschaft.de/presse/news/foxes-entwicklung-einer-emissionsfreientragbaren-energieversorgung-fuer-autonome-geraete
- Website European Commission (5.11.2020) <u>https://ec.europa.eu/programmes/horizon2020/en/news/foxes-new-pathfinder-project-enabling-decarbonisation-iot-technologies</u>
- www.europeandissemination.eu
 https://www.europeandissemination.eu/foxes-a-new-pathfinder-project-enablingdecarbonisation-for-iot-technologies/12057
- Within M3, we have set up the public website for the project: <u>https://www.foxes-project.eu/</u> (see Fig. 1 and Deliverable D8.1). The website is our main dissemination and communication venue. It will be maintained by AMO until a few years after project end, and it will contain all project results, news, press releases and (potentially) video presentations.
- Within M3, we have prepared a digital flyer for the project (see Fig. 2 and Deliverable D8.1), which has already been instrumental for contacting and engaging the members of the Advisory Board. The flyer is available for downloads on the project webpage (<u>https://www.foxes-project.eu/dissemination/project-flyer/</u>). When in-person conferences will be possible again, we will consider redesigning the flyer for a foldable printed version to be distributed at conferences and at expositions booths.

1.2 Presentation in international conferences

- Kristine Bakken (MCL) gave an invited talk at the Symposium "Ferroelectrics | Young Investigators", at ISAF (IEEE International Symposium on Applications of Feeroelectric).
 - Event: ISAF (IEEE International Symposium on Applications of Feeroelectric)
 - URL: <u>https://isaf-isif-pfm2021.org/</u>
 - Date: May 17-21 2021
 - Place: Sidney (virtual)
 - Attendance: ~700
 - Target audience: Scientific Community
 - Type of contribution: Invited talk
 - Talk title: "Tailoring BaTiO₃-Based Thin Films from Aqueous Chemical Solution Deposition by in situ Characterization"

1.3 Articles on magazines

In December 2021, the project FOXES has been mentioned in an article appeared on the Austrian online magazine JUST (<u>www.just-magazin.com</u>). The article focuses on the activities of MCL in the field of nano-sensors for environmental monitoring, and is based on an interview with Anton Köck (MCL) and Marco DeLuca (MCL).

The original article ("Nanotechnologie überwacht Gebäude und Umwelt") can be found here: <u>https://www.just-magazin.com/nanotechnologie-ueberwacht-gebaeude-und-umwelt/</u>, and an English translation on the FOXES website (<u>https://www.foxes-project.eu/2021/12/foxes-on-just-magazine/</u>).







Figure 1 Screenshot of the homepage of FOXES website https://www.foxes-project.eu/

Figure 2 Layout of FOXES' flyer

1.4 Links with other initiatives in the field

- We have established a partnership with the EU-funded project GreEnergy (<u>https://www.greenergy-project.eu/</u>), which shares with FOXES the vison of developing a technology that will allow realizing smart devices that never need to be charged from an external power supply and that do not depend on batteries. Similarly to FOXES, also GreEnergy targets the realization of a fully integrated system for harvesting and storing solar energy. However, while in FOXES the energy-harvesting element will be a lead-free solar cell, GreEnergy aims at prototyping a system based on optical nano-antennas. Both projects can benefit by comparing their different technological solutions, especially in terms of the energy balance.
- We have joined the Thematic Portfolio "Solar Energy Conversion" of the EIC Pathfinder Programme. Thematic portfolios are groups of EU-Funded projects that share common goals and work in the same scientific and/or business domain. This will allow us to develop synergies with the other projects of the portfolio, and to benefit from the advice of the EIC Programme Managers Dr. Francesco Matteucci and Dr. Marco Antonio Pantaleo. The goal of the EIC portfolio approach is to facilitate innovation journey of the projects. The kick-off meeting of this initiative took place on December 22, bringing together Programme Managers, Programme Officers and Principal Investigators of the different projects. From FOXES side, the meeting was attended by Marco DeLuca (MCL) and Thomas Riedl (BUW).

Figure 1 Draft of the structure of the Thematic Portfolio "Solar Energy Conversion".

We are natural partners of the project CITRES (Chemistry and Interface Tailored lead-free Relaxor thin films for Energy Storage capacitors). CITRES is the ERC Consolidator Grant of FOXES's coordinator Marco DeLuca (MCL), and aims at using relaxor thin-films technology to realize novel dielectric capacitors for energy storage applications with high power and energy density. With FOXES, it shares the objective of developing capacitors with better energy storage performances than supercapacitors and batteries.

1.5 Posts on social media

As described in the Dissemination Plan (Deliverable D8.2), we decided to use mainly the existing social-

media channels of the partner institutions to disseminate FOXES results and news (in particular AMO's LinkedIn and MCL's Facebook channels). In this respect we had the following activity:

- post on AMO LinkedIn, advertising FOXES' initial press release (23.07.2020) <u>https://www.linkedin.com/feed/update/urn:li:activity:6692105336045748225</u>
- post on AMO LinkedIn, advertising FOXES' kick-off meeting (02.10.2020) <u>https://www.linkedin.com/feed/update/urn:li:activity:6717690228418609153</u>
- post on AMO LinkedIn, advertising the partnership with GreEnergy (22.12.2021) <u>https://www.linkedin.com/posts/amo-gmbh_foxes-greenergy-foxes-activity-6879350488698028032-lodh</u>

1.6 Conclusions

In the first 15 months of the project, the dissemination activities of FOXES have somehow lagged behind the rest of the project. This "asynchrony" is physiological and mostly related to the lack of publishable results that is typical of the initial phase of a project. This is reflected in particular in the absence of publications in scientific journal (and of the related PRs and posts on social media), and in the limited participation to conferences and workshops.

In top of this, most networking and general science-awareness events such, as "Girls' Day", "Engineer Academy", "Career Days", "Research night", etc. have been cancelled last year because of the ongoing Covid-19 pandemic. It is very hard at the moment to predict how in-person events will evolve in the next years. However, we are very confident that the dissemination activities of FOXES will consistently increase as the project mature, in particular when the first FOXES demonstrators will become available and in the context of the proof-of-concept demonstration in the urban area of Barcelona.

Furthermore, we will continue to explore and exploit synergies with other projects and initiatives in the field, to give visibility to the project FOXES and generate constructive scientific interaction.