



SUNER-C: SUNERGY Community and eco-system for accelerating the development of solar fuels and chemicals

DELIVERABLE 5.4

Education and learning resource platform



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www.sunergy-initiative.eu/suner-c

Table 1

Project Summary	
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Table 2

Management Information	
Version 0.1	22 November 2023
WP	5 – Dissemination, communication and education
Lead and co-lead beneficiaries	CVE, ICIQ
Dissemination Level	Public
Authors	Universitatea Din Bucuresti (UB)
Deliverable Number	D5.4
Deliverable Name	Education and learning resource platform
Reviewers	WP leaders & Project Coordination Team (UU, CEA, CVE & ICIQ)
Abstract	This deliverable explains how the SUNER-C consortium has started to build an educational platform to educate and engage future generations and young professionals on the concept and impact of solar fuels and chemicals.

Table 3

Document History				
Version	Due Date	Responsible	Action	Status
Draft 1	22 November 2023	Arnau Jordà & Laura López (ICIQ)	Internal review of draft version 1 finalised	Draft
Draft 2	24 November 2023	Lili Chatzikonstantinou (CVE)	Internal review of draft version 2 finalised	Draft
Draft 3	27 November 2023	Vasile Parvulescu (UB)	Internal review of draft version 3 finalised	Draft

Final version	30 November 2023	Coordination Team	After comments from the project coordination team	Final version
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Table 4

Consortium Information

Coordinator: 1. UNIVERSITEIT UTRECHT (UU)

Beneficiaries:

2. COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (CEA)
3. EUROPEAN RESEARCH INSTITUTE OF CATALYSIS A.I.S.B.L. (ERIC)
4. UNIVERSITEIT GENT (GU)
5. UNIVERSITEIT LEIDEN (LU)
6. UNIWERSYTET WARSZAWSKI (UW)
7. FUNDACIO PRIVADA INSTITUT CATALA D'INVESTIGACIO QUIMICA (ICIQ)
8. SIEMENS ENERGY GLOBAL GMBH & CO. KG (SE)
9. DECHEMA GESELLSCHAFT FUR CHEMISCHE TECHNIK UND BIOTECHNOLOGIE (DECH)
10. FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV (Fraunhofer)
11. CARBYON BV (CAR)
12. TURUN YLIOPISTO (UTU)
13. USTAV FYZIKALNI CHEMIE J. HEYROVSKEHO AV CR, v. v. i. (HIPC)
14. UPPSALA UNIVERSITET (UppU)
15. COVESTRO DEUTSCHLAND AG (COV)
16. CO2 VALUE EUROPE AISBL (CVE)
17. FUNDACION IMDEA ENERGIA (IME)
18. ALMA DIGIT SRL (AD)
19. INTERUNIVERSITAIR MICRO-ELECTRONICA CENTRUM (IMEC)
20. AVANTIUM CHEMICALS BV (AVT)
21. NEXTCHEM S.p.A (NEXT)
22. ALLIANCE EUROPEENNE DE RECHERCHE DANS LE DOMAINE DE L'ENERGIE (EERA)
23. SYNERGEIES STIN EPISTIMI KAI TECHNOLOGIA-SYNEST IDIOTIKI KEFALAIOUCHIKI ETAIREIA (SYN)
24. UNIVERSITATEA DIN BUCURESTI (UB)
25. ARCELORMITTAL BELGIUM NV (AM)
26. VICAT (VIC)
27. BELGISCH LABORATORIUM VAN ELEKTRICITEITSINDUSTRIE (ENGIE-LAB)
28. ENGIE (ENGIE) – Affiliate Entity

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- 29. RHODIA OPERATIONS (SOLVAY)
 - 30. BOND BETER LEEFMILIEU VLAANDEREN (BBL)
 - 31. TOTALENERGIES ONE TECH BELGIUM (TEOTB) -- Associated Partner
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Executive summary

This document, D5.4 Education and learning resource platform, is a deliverable of the SUNER-C project, which is funded by the European Union's Horizon Europe under Grant Agreement No 101058481.

The main aim of the document is to provide a description of the first version of the Education and learning resource platform. The design of the platform has started during the first half of the project and will be continued through the second half, to provide a final version of an online platform at the end of the project. This platform will be an instrumental tool to provide educational materials to educate and engage multiple audiences on the concept and impact of solar fuels and chemicals.

The document includes definitions of target groups and the types of contents. Finally, it also includes a description of the next steps to be followed to finish up with a large populated mapping tool.

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List of abbreviations

List of abbreviations

CSA	Coordination and Support Actions
C&D	Communication and Dissemination
D	Deliverable
H2020	Horizon 2020
KPIs	Key Performance Indicators
WP	Work Package

1 | Educational Platform

1.1. Main objective

Education is an important instrument to stimulate future generations to work on a specific topic. The Educational Platform is a user-friendly website that aims to contribute on encouraging interest about solar fuels and chemicals by enabling visitors to find relevant content and courses.

We created an open online platform on the SUNER-C website that gathers learning materials available for students at all levels up to professional researchers. This includes the promotion of expert courses for PhD/MSc students as well as entry level materials for students from other scientific fields and younger ages, and even some content is suitable for families and society in general.

Ultimately, this educational platform represents a crucial instrument for stimulating future generations to actively contribute to the development of solar fuels and chemicals. By fostering an environment of learning, collaboration, and innovation, SUNER-C's initiative seeks to shape a more sustainable future through education at all levels.

1.2. Platform Users

The content is structured into three distinct profiles, ensuring a comprehensive and organized approach that reaches a diverse audience: Everyone, Master/PhD Students, and Scientific Professionals.

- **Everyone:** This section is designed for the general audience, from individuals with a curiosity about sustainable fuels to families. Here, users can find easy to understand and informative content. It includes materials like videos, interviews and hands-on experiments to introduce this concept also to kids and young adults by reproducing some science at home, so they can learn by doing.
- **Master / PhD Students:** Tailored to meet the needs of advanced learners, this profile offers in-depth resources such as specialized books, academic papers, and comprehensive videos. Master and PhD students can delve into these materials that go beyond introductory content

to provide a thorough understanding of the subject. The platform aims to support higher education by serving as a valuable resource for research and study.

- **Scientific Professionals:** Aiming to reach professionals in the scientific community, this section offers a collection of materials, including advanced research papers, reports or expert interviews.

1.3. Types of content

The educational platform is designed to be a repository of learning materials. One of the key features of the platform is the inclusion of a variety of materials, ensuring that users have access to an engaging educational experience that adapts to different learning styles and preferences.

The types of content that the educational platform offers are:

- **Books:** The platform will host a collection of books that cover topics related to sustainable fuels. In addition, the SUNER-C community started the elaboration of 3 new books: one for advanced scientists, one for kids and another one for scholars and students. Each of these books, that are not published yet but progressing well, focus on a different level serving as introductory or in-depth resources, providing readers with insights into the theoretical and practical aspects of solar fuels and chemicals.
- **Videos:** Visual learning is a powerful tool, and the inclusion of videos on the platform will offer dynamic content to enhance understanding.
- **Interviews:** The platform will feature interviews with experts in the field, offering their point of view and direct explanation of their work and research on sustainable fuels.
- **Podcasts:** The platform will include podcasts discussing various aspects of solar fuels, featuring experts, researchers, and leaders who can provide valuable insights and discussions on the subject.
- **Articles and reports:** The platform will provide access to a selection of peer-reviewed papers and relevant studies and reports in the area, allowing advanced users from

Master/PhD and Scientific Professional to delve into the latest research and advancements in the field.

- **Hands-on Experiments:** Learning by doing is a powerful educational approach. Mainly aimed for families and kids, the platform will feature hands-on experiments to understand better key concepts.
- **Infographics:** These graphical representations will break down intricate ideas into easily digestible visual elements.

2 | Website

A specific website has been designed within the SUNER-C webpage for the Educational Platform under the following URL: sunerc-edu.sunergy-initiative.eu

The way to access it is by selecting “Educational Portal” in the SUNER-C dropdown menu from the sunergy-initiative.eu website.

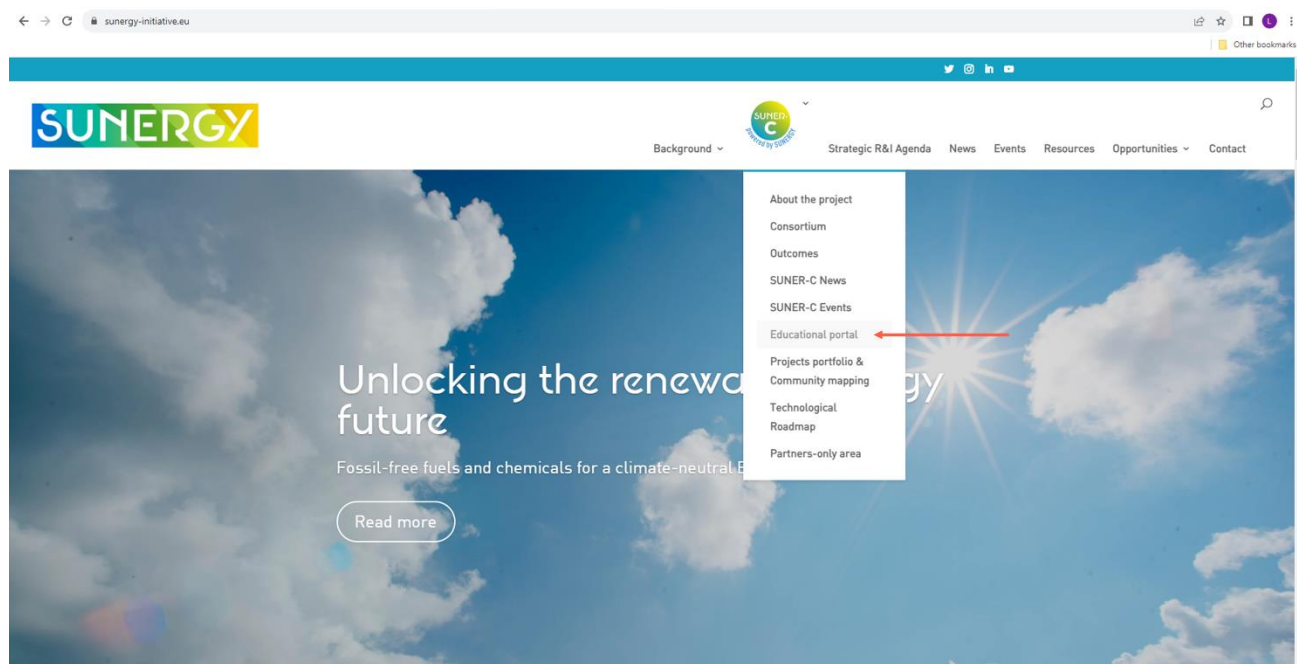


Figure 1. Caption of how to reach the Educational Platform

The last interaction redirects you to the already mentioned website: sunerc-edu.sunergy-initiative.eu where you can find a short introduction about the platform.

By scrolling down after the paragraph introduction, you can see a menu/slide with images where you can select which profile you are (Everyone, Master/PhD or Scientific Professional).

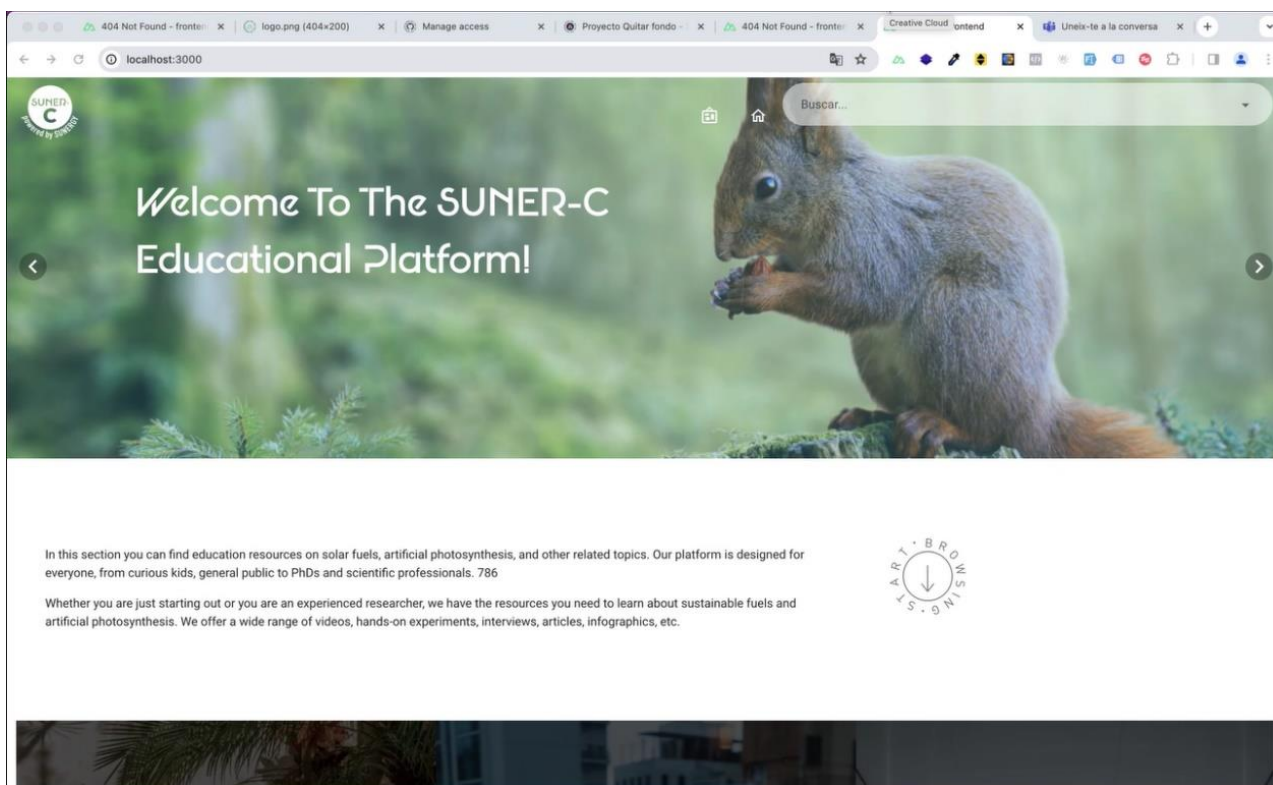


Figure 2. Caption of the Educational Platform homepage with an introductory paragraph

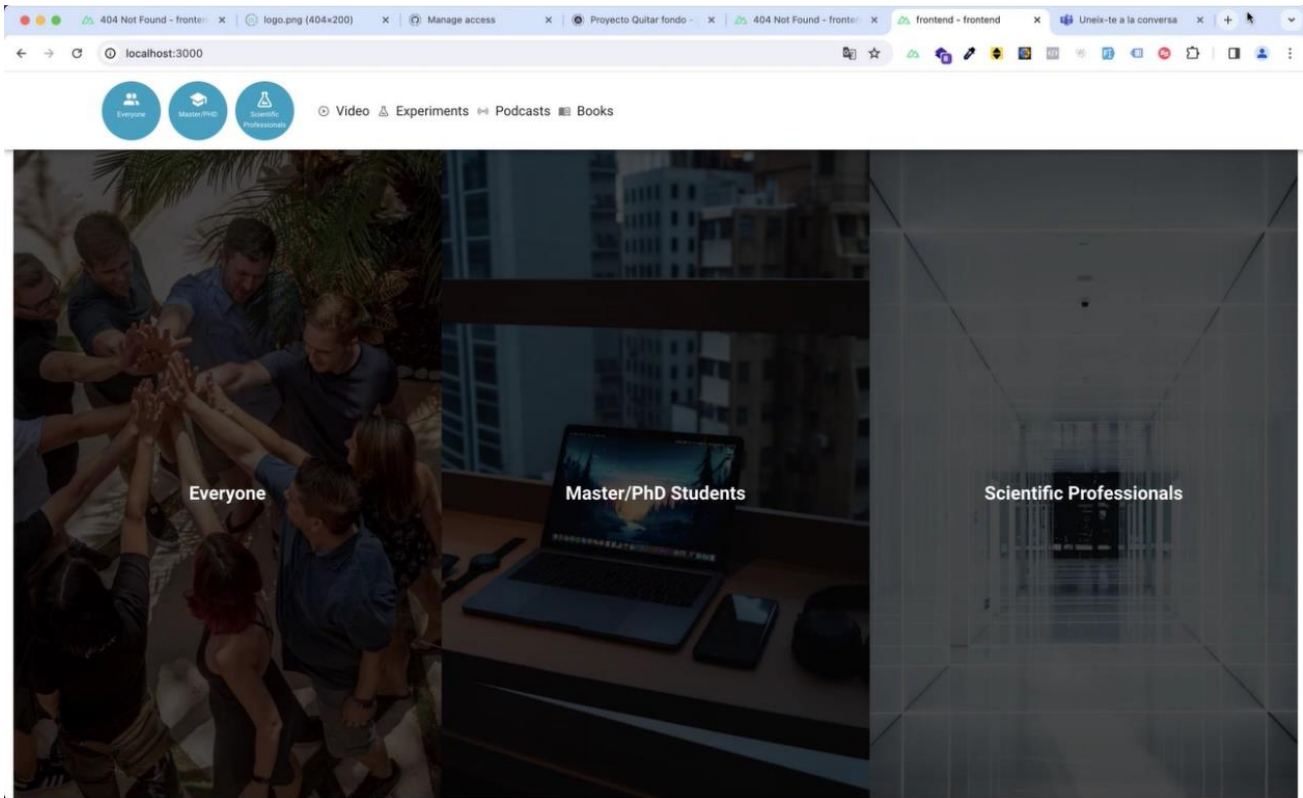


Figure 3. Caption of the Educational Platform homepage with a menu to select your profile.

By clicking, for example the profile menu “Everyone”, the user is redirected to the specific page of that profile where content only suitable for “Everyone” will be shown. With a user-friendly approach, the user knows at all times in which profile they are and the titles (Videos, Interviews, Podcasts, etc.) tell them which kind of content are in that section.

Facilitating easy navigation, a static menu positioned at the top of the page allows users to effortlessly switch between profiles, such as Master/PhD or Scientific Professionals, expanding their exploration of diverse content. The menu is equipped with a search bar labeled "Search..." for quick access to specific topics. Additionally, users can directly access specific content types (Videos, Interviews, etc.) by clicking on the blue round button into the top static menu.

Enhancing user decision-making, the inclusion of tags, highlighting topics covered and language, provides valuable information. These tags serve as a guide, aiding users in determining the relevance and appeal of the content, contributing to a more personalized and enriching browsing experience.

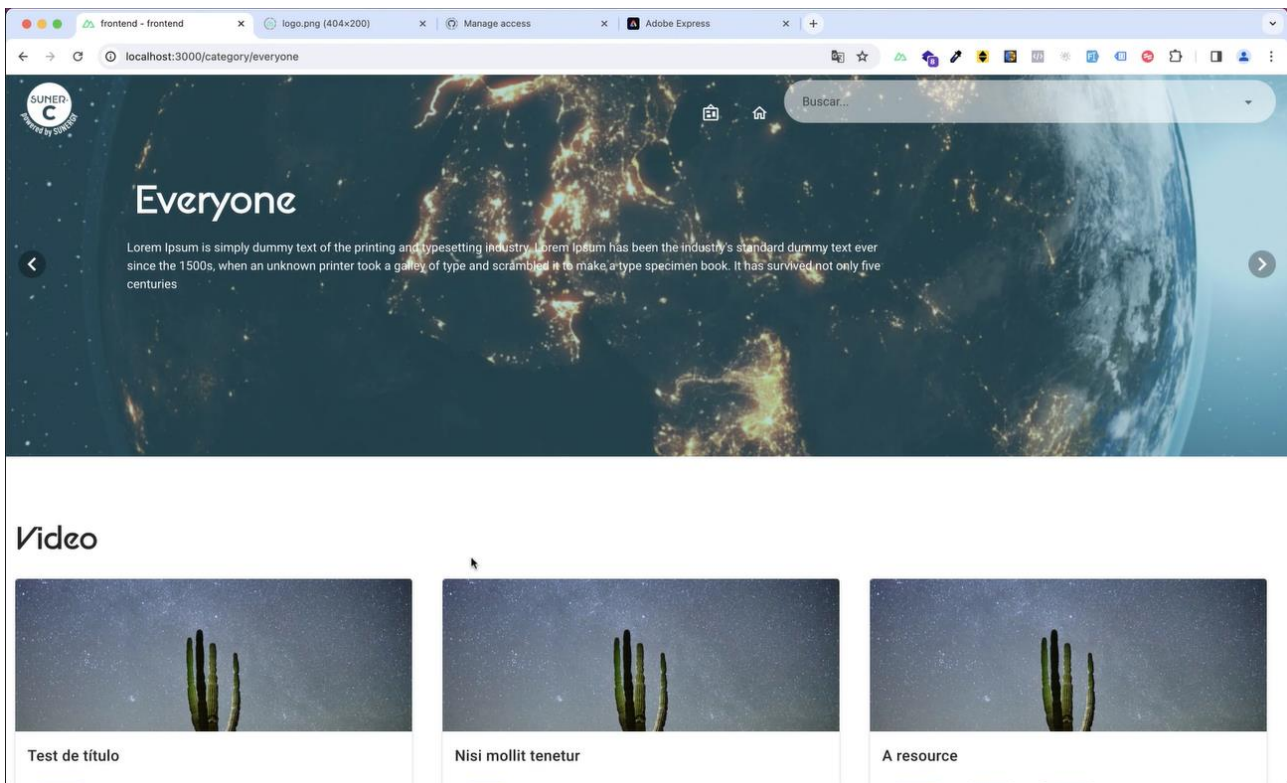


Figure 4. Caption of how the “Everyone” page showcasing the videos content.

3 | Content and governance

The collaborative efforts of the entire consortium have successfully curated content for a first version of the educational platform just released. Combining existing materials from consortium partners with newly created content by SUNER-C, we aim to establish a unique and relevant repository for key information in our focused area. Our vision includes fostering an engaged community that actively contributes new content to the platform.

This dynamic platform allows continuous content updates throughout the project. The authors and co-authors of this deliverable, as responsables of it, have created an approval process to ensure that all materials undergo a quality filter before being published. This meticulous approach guarantees that every piece of content featured on the educational platform is not only useful but also accurate for the end user.



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