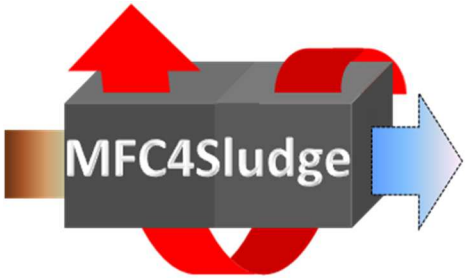
“MFC4Sludge”: Microbial fuel cell technologies for combined wastewater sludge treatment and energy production

FP7-SME-2013, Grant Agreement No. 605893



Deliverable D6.8

Videoclip production about the project

Project details

Start date: 1st August, 2013 Duration: 24 months

Participant no.	Participant organization name	Participant short name	Country	Organisation type
1(Coord)	Ecotrend S.R.O.	ECO	Czech Republic	SME
2	Emefcy Ltd.	EMEFCY	Israel	SME
3	Automação e controle industrial, Lda	ACONTROL	Portugal	SME
4	Fraunhofer-Institute for Interfacial Engineering and Biotechnology IGB	FRAUNHOFER	Germany	RTD
5	Acondicionamiento Tarrasense Associacion	LEITAT	Spain	RTD
6	Optimización orientada a la sostenibilidad S.L.	IDENER	Spain	RTD
7	Gipuzkoako Urak, S.A.	GURAK	Spain	PUBLIC BODY

Deliverable information

PROJECT GA NUMBER	**605893**
PROJECT NAME	**“MFC4Sludge”: Microbial fuel cell technologies for combined wastewater sludge treatment and energy production**
DELIVERABLE NUMBER	6.8
DELIVERABLE NAME	Videoclip production about the project
DELIVERABLE VERSION	V1.0
DATE OF DELIVERY	31/07/2015
TOTAL PAGES	3
PERSONS-MONTH REQUIRED	2.22
CLASSIFICATION	PU
LEAD BENEFICIARY	ACONTROL

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Abstract

Production of a video clip is included in the Description of work as an activity that will produce an additional tool for dissemination of project results.

Accordingly, a video clip has been produced and then uploaded to YouTube as worldwide platform for sharing videos granting free access.

Main URL for the video clip is: http://youtu.be/HKcGrrW9tZ4

Moreover, a link to the project video clip has been included in the project website.

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1. Introduction

Dissemination activities are very important in order to increase impact of project results. When these results are targeted to SMEs, far from scientific audience, it is important to find new ways of reaching the public. In this case, it is crucial to consider free-access ways and to increase the audio-visual impact of the presented results. Following this approach, the production of a video clip appears as the best solution for spreading project results among public audience.

2. Video content

Since the video clip is aimed to provide information about project concept and main carried out work and project results, this information was drafted in an easy and understandable manner.

The video starts providing information about wastewater treatment and sludge and then reviews main concepts from the project (including the consortium composition). Later, each stage of project process is explained and finally, information about the deployment and operation of the prototype is provided.

As for the video making process, several shoots were carried out at GURAK facilities in order to provide a view of the wastewater treatment plant where the prototype has been implemented. Regarding the speech, a transcription of it can be found in Annex I.

3. Video upload to YouTube

After production, the video was uploaded to YouTube. YouTube is a video-sharing website headquartered in San Bruno, California. The site allows users to upload, view, and share videos, and it makes use of Adobe Flash Video and HTML5 technology to display a wide variety of user-generated and corporate media video. Available content includes video clips, TV clips, music videos, and other content such as video blogging, short original videos, and educational videos.

In order to upload the video clip, the consortium has created a user, “MFC4sludge European Project” and has then followed the IPR guidelines from the Consortium Agreement in order to protect participating SMEs IPR interest.

Main URL is http://youtu.be/HKcGrrW9tZ4

4. Conclusions

YouTube is the world largest video platform. Hence, it can be identified as one of the most powerful tools for reaching public audience when disseminating project results. A video clip has been produced and uploaded containing valuable information such as project consortium description, proposed solution for sludge valorisation and main activities carried out.

ANNEX I: Transcription of MFC4Sludge You Tube video speech

Wastewater sludge is the main by-product of the most-widely employed biological treatment of wastewater with activated sludge. The disposal of this sludge easily reach up to 60% of the total operation cost of a treatment plant and consume vast quantities of energy. In addition, urban growth and the proliferation of wastewater treatment plants have sharply increased and will continue increasing the production of municipal sludge worldwide. It is therefore essential to develop handling and disposal technologies that enable maximum valorisation of this waste and, at the same time, minimum environmental impact.

Within this framework, a group of European SMEs and RTD performers have promoted MFC4Sludge, a project funded by the 7th European Framework Programme for Research and Technological Development.

The technology developed in MFC4Sludge is composed of two main subsystems: hydrolytic-acidogenic anaerobic digester, and microbial fuel cell.

The hydrolytic-acidonegic anaerobic digester processes the sludge produced within wastewater treatment plants in order to serve as a pre-treatment stage for the microbial fuel cell. Specifically, the output of this process is an effluent rich in volatile fatty acids.

This effluent is fed into the microbial fuel cell, which is a bio-electrochemical device that harnesses the power of respiring microbes to convert the input organic substrate directly into electrical energy and reducing at the same time the volume and COD content of the initial sludge. The stream leaving the MFC can therefore be directly incorporated to the wastewater main process, while reducing the overall plant energy demand.

A prototype of this technology has been constructed and validated in Gipuzkoako Urak, located in Aduna, next to San Sebastian, in the north of Spain. Apart from the two main subsystems composing MFC4Sludge (the hydrolicit-acidogenic anaerobic digester and the microbial fuel cell), the prototype includes all the integrating elements and state-of-the-art control solutions, so as to achieve optimal performance and robustness.

MFC4Sludge, a step towards an environmentally-balanced wastewater treatment process.