# "MFC4Sludge": Microbial fuel cell technologies for combined wastewater sludge treatment and energy production

FP7-SME-2013, Grant Agreement No. 605893



# **Deliverable D6.7**

# Wikipedia page about the project

#### **Project details**

Start date: 1<sup>st</sup> 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	
DELIVERABLE NUMBER	6.7	
DELIVERABLE NAME	Wikipedia page about the project	
DELIVERABLE VERSION	V1.0	
DATE OF DELIVERY	31/07/2015	
TOTAL PAGES	6	
PERSONS-MONTH REQUIRED	2.03	
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### Abstract

A Wikipedia page summarising project concept, objectives and main work carried out has been published.

However, MFC4Sludge article and consortiums account have been blocked by the Wikipedia administrators community. The consortium has tried to deal with them but the account is still blocked and no positive feedback has been received.

Link: https://en.wikipedia.org/wiki/MFC4Sludge

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### 1. Introduction

As part of the dissemination activities planned for this project, the publication of an article in Wikipedia website is envisaged.

Wikipedia is a free-access, free content Internet encyclopaedia, supported and hosted by the non-profit Wikimedia Foundation. Anyone who can access the site can edit almost any of its articles. Wikipedia is the sixth-most popular website and constitutes the Internet's largest and most popular general reference work. Hence, the consortium and the REA have decided to use this website as additional tool for dissemination purposes.

### 2. Wikipedia article

The article content that has been published is included in Annex I.

LINK: https://en.wikipedia.org/wiki/MFC4Sludge

### 3. Publication issues

A new user has been created in Wikipedia website in order to publish the corresponding page. The name of the user is "MFC4Sludge consortium".

	Page Discussion	Read Edit View history 🛱 Search				
	MFC4Sludge					
	MFC45udge is an industrial research project funded under the Capacities programme, specifically, as part of the "Research for the benefit of alternative to existing wastewater studge treatments with minimum environmental impacts and without increasing energy consumption of cur conversion of studge in objectricity while operating at antibient temperature with two biomass productions and nether requiring as handing on treatment using partial anaecobic digetStor. MFC system development alimet at improving system efficiency and cost-effectiveness. MFC con final solution. This project involves three SUSE (SCOTERG) CADTROL and Enference programs (Francement Generation and an advisors). The SUSE SUSE (SCOTERG) CADTROL and Enference programs (Francement Generative) and solution. This SUSE (SCOTERG) CADTROL and Enference programs (Francement Generative).	FSMES* call (Grant Agreement FP7-SME-2013/EC-GA-606583). Main aim is to develop a reliable, cost-effective and efficie ent washwater testiment plants. To That end, "INF-CSMUAge" will take advantage of the potentials of MFC regarding direct and another many advancement believes that direct-fibrant research activities: will be coursed in washwater advance third strategies design in order to reach an optimal performance, and integration of the different elements which compose the VI, DENEXB, and one ensures (GUARA).				
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	4 Bilogopfa 5 Referencian 6 External Links					
s	Project objective and methodology [sea]					
	Through project well programme, project main allin is beenice and demonstrate the feasibility of the proposed solution as a new alternative for wastewater studge valorisation. The methodology that has been followed has been a proper technology upgrading, starting from the individual HA-0A, MPC and control strategies development at lab-scale, the integration of the whole system at lab scale (LI MPC operation) and finally implementation of a scale-up 104. MPC prototype in a real wastewater treatment plant so as to retrieve data. Those operation in a real wastewater treatment plant so as to retrieve data. Those methods are development at lab-scale.					
	Impact for participating SMEs [edit]					
Reg addi • E • E • E • E • E • E • E • E	Regarding the impact for the participating SMEs and given high potential market opportunities for MFC4Sludge outcomes, the results of the p additional employment directly related to the project results commercialization. More specifically, main results and knowledge for each individi	roject will improve its competitiveness by providing them with a valuable know-how, potential economic growth and ual SME are summarised next:				
	<ul> <li>ECO: Development of a company new product almed at sludge pre-treatment, enhancement of microbial community knowledge which can performance optimization</li> </ul>	t be extrapolated to other company's AD applications enhancement and acquisition of know-how about partial AD				
	<ul> <li>EMEFCY: Development of a new company product by improving existing portfolio suited for a broader MFC-based sludge management a that hinder its commercialization and increment of the company's know-how regarding MFC design and architecture ACONTROL. Broadening of the company's portfolio of control solutions: introduction to avaetwater and studied management markets and</li> </ul>	pplication range, consolidation of the company's market leading position in MFC and bioreactors by breaking the barriers creation of swneroles with the other project participants, which are also new potential clients				
	Contribution to advancement of knowledge / technological progress (see					
	One of the main innovations of "MFC4Studge" with respect to state-of-the-art MFC-related research is the project's integrated solution itself. although it works better in low load wastewater. On the other hand, hydrolytic-acidogenic digestion (HA-AD) is a well established and impleme	On one hand, it is well established that MFC technology can be used to treat substrates with high COD (i.e., sludge), inted technology for high load wastewater which however requires further effluent treatments to remove residual organic				



After following the corresponding procedure for publishing the article, it went online for a few days. After that, the article and the account were blocked with the following message: "Your account has been blocked indefinitely from editing Wikipedia because it appears to be mainly intended for publicity and/or promotional purposes. If you intend to edit constructively in other topic areas, you may be granted the right to continue under a change of username."



Since no copyright violation has taken place (its publication followed the IPR guidelines addressed in the Consortium Agreement), the consortium replied the Wikipedia community informing them about the contractual obligation of the EC-GA about publishing a Wikipedia article and the dissemination purposes of it. However, this request has been declined by the Wikipedia administrators as last action regarding this issue.

#### Creating MFC4Sludge

You have followed a link to a page that does not exist yet. To create the page, start typing in the tox below (see the help page for more into). If you are here by mittake, click your boower's **Back** button. Warring: You are recreating a page that was previously deleted. You should consider whether it is appropriate to continue editing this page. The deletion and move kig to this page are provided here for convenience. • 22 34, 13 July 2016 (JUCI (fak)) remitted believed page MFC illustry.

#### 4. Conclusions

A Wikipedia article about MFC4Sludge project for dissemination issues have been published. Despite of main objective of dissemination purposes and even with the approval of the whole consortium (following IPR guidelines from the Consortium Agreement), the Wikipedia administrators have decided to block both the user and the article of the project.

This consortium has tried to explain the main rationale behind the article but it seems that Wikipedia administrators do not consider Wikipedia as a tool for an EU project dissemination purposes.

### ANNEX I: MFC4Sludge Wikipedia page content in Wiki code

"'MFC4Sludge'" is an industrial research project funded under the Capacities programme, specifically, as part of the "Research for the benefit of SMEs" call (Grant Agreement FP7-SME-2013/EC-GA 605893). Main aim is to develop a reliable, cost-effective and efficient alternative to existing wastewater sludge treatments with minimum environmental impacts and without increasing energy consumption of current wastewater treatment plants. To that end, "MFC4Sludge" will take advantage of the potentials of MFC regarding direct conversion of sludge into electricity while operating at ambient temperature with low biomass production and neither requiring gas handling nor aeration. Taking into account the latest state-of-the-art, research activities will be focused in: wastewater sludge pre-treatment using partial anaerobic digestion; MFC system development aimed at improving system efficiency and cost-effectiveness; MFC control strategies design in order to reach an optimal performance; and integration of the different elements which compose the final solution. This project involves three SMEs (ECOtrend, ACONTROL and Emefcy), three qualified RTD performers (Fraunhofer IGB, LEITAT, IDENER) and one end-user (GURAK).<ref>{|url=http://www.mfc4sludge.eu/?page\_id=10 |tittle="Overview" |editorial=Public website MFC4Sludge project}} </re>

== Project objective and methodology ==

Through project work programme, project main aim is to develop and demonstrate the feasibility of the proposed solution as a new alternative for wastewater sludge valorisation. The methodology that has been followed has been a proper technology upgrading, starting from the individual HA-AD, MFC and control strategies development at lab-scale, the integration of the whole system at lab scale (1L MFC operation) and finally implementation of a scale-up 10L MFC prototype in a real wastewater treatment plant so as to retrieve data from operation in a real working environment.

== Impact for participating SMEs ==

Regarding the impact for the participating SMEs and given high potential market opportunities for MFC4Sludge outcomes, the results of the project will improve its competitiveness by providing them with a valuable know-how, potential economic growth and additional employment directly related to the project results commercialization. More specifically, main results and knowledge for each individual SME are summarised next:

\* ECO: Development of a company new product aimed at sludge pre-treatment, enhancement of microbial community knowledge which can be extrapolated to other company's AD applications enhancement and acquisition of know-how about partial AD performance optimization

\* EMEFCY: Development of a new company product by improving existing portfolio suited for a broader MFC-based sludge management application range, consolidation of the company's market leading position in MFC and bioreactors by breaking the barriers that hinder its commercialization and increment of the company's know-how regarding MFC design and architecture

\* ACONTROL: Broadening of the company's portfolio of control solutions, introduction to wastewater and sludge management markets and creation of synergies with the other project participants, which are also new potential clients

<sup>==</sup> Contribution to advancement of knowledge / technological progress ==

One of the main innovations of "MFC4Sludge" with respect to state-of-the-art MFC-related research is the project's integrated solution itself. On one hand, it is well established that MFC technology can be used to treat substrates with high COD (i.e., sludge), although it works better in low load wastewater. On the other hand, hydrolytic-acidogenic digestion (HA-AD) is a well-established and implemented technology for high load wastewater which however requires further effluent treatments to remove residual organic molecules such as alcohols, acetate, propionate and butyrate. The integration of these two processes, which for the best of this project proposers' knowledge has not been reported before, has the potential to generate very convenient synergies: 1) HA-AD can be used as a pre-treatment of sludge to transform it to a much suitable substrate for MFC; 2) Volatile fatty acids (VFA) of HA-AD effluents can be effectively consumed in MFCs; 3) The energy generated in the MFC can be used to decrease the overall energy demand of the wastewater treatment plant; and 4) HA-AD integration can improve the treatment capacity in terms of COD degradation and reduction of sludge generation. Consequently, MFC and HA-AD are not competitive technologies but complementary and can be coupled to treat wastewater sludge (which usually MFC are no able to treat by themselves) in a more efficient, competitive and sustainable process with respect to current state-of-the-art solutions.

== Bibliography ==

\*New approach to sewage sludge treatment <ref>{{ |url=http://cordis.europa.eu/result/rcn/158604\_en.html |title="New approach to sewage sludge treatment" |editorial=CORDIS Community Research and Development Information Service}} </ref>

\*Periodic Report Summary 1 - MFC4SLUDGE ("MFC4Sludge": Microbial fuel cell technologies for combined wastewater sludge treatment and energy production) <ref>{{ |url=http://cordis.europa.eu/result/rcn/153300\_en.html | title ="Periodic Report Summary 1" |editorial=CORDIS Community Research and Development Information Service}} </ref>

== References ==

{{listaref}}

== External Links ==

\* [http://cordis.europa.eu/project/rcn/109542\_en.html].

\* [http://www.mfc4sludge.eu].