Boletín de Oportunidades de Cooperación: Medio Ambiente

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enterprise europe network

Medio Ambiente:

Tecnologías Ambientales

H2020-IND-CE-2016-2017: Manufacturers, companies and research institutes are sought for the development of a LED-based ligth-engine

Summary

A Spanish research Institute specialised in energy is writing a project proposal for the call H2020-IND-CE-2016-2017 (New technologies and life cycle management for reconfigurable and reusable customised products). The aim of the project is to design and fabricate a smart LED-based light-engine adapted to specific customers and application fields using re-usable and re-configurable parts.They are looking for manufacturers, companies and other research institutes with expertise in lighting.

Creation Date	06 October 2016
Last Update	11 October 2016
Expiration Date	11 October 2017
Reference	RDES20161006002
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/f82f404a-7f65-4512-ac3c-07553d320043

Details

Description

The Repro-light project (Re-usable and re-configurable parts for sustainable LED-based lighting systems) aims at designing and fabricating a smart LED-based light-engine (spectral reproduction, daylight compensation, …) adapted, as far as possible, to specific customers and/or application fields, all this keeping in mind the criterion of cost limitation and high mass-market penetration.

Particular objectives can be summarized as follows:
• Customization: The resulting personalised products are expected to satisfy the final consumer needs at an individual level and consequently to facilitate daily life (particularly concerning elderly, disabled or other target groups with special needs)
• Trade-off customization-standardization: Customization has to be done from the perspective of cost limitation and technology wide-spreading (high market penetration) so a certain degree of standardization has to be considered.
• Sustainability: Luminaire components will be selected (as far as possible) under criteria of minimum environmental impact and recycling easiness (through life cycle assessment (LCA) studies).
• Modularity: the light-engine will be fabricated in a modular way in the pursuit of high versatility and minimum environmental impact through the reutilisation of usable parts.
• Updatability: in response to modularity, the product will be conceived under the basis of full software and hardware updatability
• Low-cost: the use of new materials and fabrication techniques, such as 3D printing, will be

assessed in the research of optimum customisation. In order to minimize cost, they will be combined, if possible, with their conventional counterparts.

This initiative arises in the framework of the EC (European Commission) H2020 Call “Industry 2020 in the circular economy” and specifically of the topic “New technologies and life cycle management for reconfigurable and reusable customised products”. In response to this EC Topic of interest, the institution, with extensive experience in both Lighting technology and Life-cycle assessment and long record on EU project coordination, has conceived the Repro-light project. As previously stated, the project intends to fabricate a LED-based light-engine fully remote controllable whose intelligence (spectral reproduction, daylight compensation or even Visual Light communications) and performance (light beam, light output power …) will be adapted to specific consumers or application areas. This will be accomplished by following the criteria of minimum cost (custom-standard trade-off in the selection of processes and materials) and maximum sustainability (i.e. maximum modularity, updatability and recyclability).

Manufacturers, companies and research centres are being sought in order to carry out the design and fabrication tasks of the project.

Call: H2020-IND-CE-2016-2017 (New technologies and life cycle management for reconfigurable and reusable customised products)
Call deadline: 19/01/2017
Deadline for EOIs: 31/10/2017
Anticipated duration of the project: 3 years

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Experience Comments

Research centre with extensive experience in both Lighting technology and Life-cycle assessment and long record on EU project coordination

Languages Spoken

English
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

Manufacturers, companies and research centres are being sought in order to carry out the design and fabrication tasks of the project.

- Research Institute: Lighting design, photometric validation and LCA.
- Lighting manufacturer: Lighting design and market perspective.
- Cluster or association: Lighting design (according to standards) and inception of new regulation.
- Firmware/Software enterprise: Light-engine programming and to guarantee software updatability.
- Assembling line designer: To assure compatibility between new methods and materials with industrial assembling lines.
- Social partner: User acceptance and market analysis.
- Dissemination, environmental communication: Website follow-up, newsletters, video broadcast.
- 3D printing/additive manufacturing: Fabrication of customized parts according to standards and LCA indicators.
- LEDs/LED modules manufacturer: Fabrication of LED-based modules incorporating sustainable methods and materials.

Type of Partnership Considered

Research cooperation agreement

H2020 FOF-10-2017: Partners sought for customization and reutilization of mobile devices based on single components, complete circuits as well as whole devices with or without display

Summary

The project is about modifications and reuse of high-end devices (e.g. mobile phones) or parts of them. This can be done either on the component and circuit level or by using the devices as a whole in an application. The objective is to realize a pilot process chain. Partners should be experienced in developing consumer electronics or recycling high-end devices. The project will be submitted to the EU H2020 program FOF-10-2017 and coordinated by a research facility in Germany.

Creation Date	02 September 2016
Last Update	07 October 2016
Expiration Date	07 October 2017
Reference	RDDE20160902001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/cc2e2ddd-b290-4aa6-8a85-b0ce35e527e3

Details

Description

The research domain is a mix out of development of electronics and informatics as well as production and reuse/recycling technologies. The development of electronics focuses on the implementation of small add-ons or stand-alone devices with new hardware, whereas the software is needed to add new methods and functionalities, as well as in the computer vision and artificial intelligence domains. The production parts cover the fabrication of these devices with focus on economical and reliable processes. The end-of-life part is covered by the recycling technologies, which are researched in order to enable the extraction and reuse of components or circuits.
Useful results would be methods to extract and modify components from high-end devices and pilot devices employing those components. By supplying parts or whole devices to a new use, typically two targets are reached: First, the user is allowed to customize his devices according to his wishes. Then, the devices are used for a longer period leading to a more economical and environmentally friendly life cycle.
To reach these targets, specific add-ons for the devices should be developed in order to enable customization of the devices, e.g. a camera add-on or a network interface. These add-ons should be developed to cover a wide range of applications. Possible options are simple data loggers as well as network extensions and surveillance tasks or assistive devices for elderly.
The add-ons will focus on the most used devices and operate under typical operating systems.
In this region some research was already done, such as the development of a parcel butler

based on a smart phone. Additional ideas for reuse like home automation applications or the reuse of components and electronics of partly damaged hardware are currently under research in small scale.
The described modifications can be implemented using software or hardware extensions. Therefore, partners are sought with experience in developing home automation electronics or adjacent fields. In order to cover the complete process chain another research topic targets the production of devices focused on future modifications. Partners from this field should cover some production capabilities concerning electronics. On the other hand, the reuse of components or circuits of damaged devices are also important for this project. To cover this topic a pilot plant for detection of valuable components was realized. Nevertheless, partners with experience in the reuse and recycling sector are most welcome, as it is planned to develop a plant in an industrial environment.
The founding program is part of the cross-cutting activities within the EU research program H2020. The framework conditions consist mainly of the complete coverage of the process chain as well as inclusion of at least 3 partners from different countries, out of whom the project coordinator is one. Beside these international conditions, the developed technologies should lead to a reduction of the time to market and the manufacturing costs of personalized products. Moreover, the technologies should be environmentally friendly and rather flexible in their use. The EU commission considers an average contribution of around EUR 5 million appropriate for these topics.
The project coordinator is head of a laboratory with focus on development of electronics and informatics and part of a wider research network realizing reuse projects. Besides the coordinator, there are several small-scale business contacts within Germany from different regions. The contacts are from different regions, e.g. small scale production or recycling. The requested partners should cover part of the process chain indicated above. Needed capabilities range from development skills in household electronics to informatics, from production to recycling and reuse of electronic components.
Call deadline: 19th January 2017
EOI deadline: 12th December 2016

Stage of Development

Proposal under development

Comments Regarding Stage of Development

There is a prototype showing the possibilities of reuse of mobile devices. This prototype meets the TRL6 criteria for the EU-Call as well as the classification "Prototype available for demonstration". Moreover a pilot plant in the reuse/recycling section for detection and extraction of components on different kinds of hardware is there. The pilot plant meets the TRL5 criteria.

IPR Status

Other

Comment Regarding IPR status

For the customization part the project is focused on developing software or simple hardware extensions, such no rights are reserved nor required.
In the recycling section typical industrial hardware should be employed, e.g. sensors or conveyors. The main development will focus on software, so patents are not required here, too.

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Open for EOI : Yes

Dissemination

Restrict Dissemination to Specific Countries

Austria, Belgium, CzechRepublic, Denmark, France, Netherlands, Poland, Sweden, Switzerland,

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

1995

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
German

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

Type: Industry, home automation
Role: Co-development of appliances compatible to mobile devices
One part of the project is to develop appliances and interfaces to connect mobile devices to other hardware for customization purposes, e.g. home automation. One idea is to implement

used high end devices like smartphones as control unit for surveillance applications. The smartphone could be used as main component in a baby monitor or remote camera. The other possible option is to use the device as management system for different slave units, e.g. list all active electrical sockets. Partners from this region should be experienced with developing and producing home automation applications and devices within Internet of Things (IoT). Mutual benefits would be the elaboration of joint ideas and additional concepts as well as the commercialization of the devices.

Type: Industry, elderly assistance systems
Role: Co-development of appliances compatible to mobile devices
Another part is the support of the elderly by supplying assistance systems to mobile devices. One example is the implementation of an emergency button in combination with voice recognition. A device equipped with such an extension could start an emergency call to a predefined number, if it detects irregular behaviour or an emergency. Other possible options include the development of automated administrations of medications. Such a device could notify the operator of necessary ingestions at different times. Reasonable healthy elderly can be assisted in their daily life by voice navigation focused on older people or by connectivity to home automation and IoT. An example could be a notification in case of a stove plate or gas heater left on. Less dangerous things could be finished washing machines. Partners should be experienced with serving elderlies needs and interested in working on this field. Optional benefits would be connections to health insurances.

Type: Industry or academia, recycling
Role: Co-development of plant for high-end devices
The reuse and recycling part is of great importance to this project. The reuse is planned on several levels. In case of full functionality of the device the complete reuse is intended. On the next level useful components should be extracted. Examples are displays, circuit parts or accumulators. The lowest level reuse is taking place on a component basis. Partners should be familiar with the withdrawal and handling of used high end devices. As it is planned to test for functionality and, if negative, disassemble and reuse parts, experience with this steps is useful and recommended.

Type: Industry, production of mobile devices
Role: Co-development of customization options for mobile devices
In order to cover the complete value chain producers of mobile devices are searched as partners. Possible interactions could be the providing of mobile devices, used or otherwise, as well as the support for developing interfaces for the smartphones. A mutual benefit would be the collaboration for allowing different specialisations of the devices.

Type and Size of Partner Sought

SME 11-50,University,Inventor,R&D Institution,SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

Research cooperation agreement

System based on nanoparticles to remove organic recalcitrant pollutant.

Summary

A Spanish university has developed a new system based on nanoparticles to remove organic micropollutants from industrial efluents or wastewater treatment efluents. The system based on ligninolytic enzymes immobilized using magnetic nanoparticles has shown very good results in a bench scale reactor. The university is looking for partners interested in licensing the technology or working together in the development of the technology.

Creation Date	14 October 2016
Last Update	25 October 2016
Expiration Date	25 October 2017
Reference	TOES20160623001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/0d06908f-4439-4d2a-8fd0-eaa2082b282b

Details

Description

The discharge into the aquatic environment of organic recalcitrant pollutants from wastewater treatment plants is a major environmental problem due to the possible adverse effects that these chemicals have on animals, plants and people. Among these, a group of micropollutants of natural and anthropogenic sources (e.g. pharmaceuticals, pesticides, cosmetics and personal care products, flame retardants, hormones and other industrial chemicals) may potentially alter the functions of endocrine system and therefore, cause adverse effects on an organism or its progeny. On the other hand, the use of synthetic chemical dyes in various industrial processes, including paper and pulp manufacturing, plastics, dyeing of clothes, leather treatment and printing, results in the release of dye-containing industrial effluents with recalcitrant nature.

Conventional systems of wastewater treatment are not designed to remove these compounds, and their removal is only partial. The technology developed by the Spanish university was adapted to remove these kinds of pollutants.

The invention comprises an organic recalcitrant pollutant removal system based on the use of ligninolytic enzymes. The enzymes are immobilized using magnetic nanoparticles. The system was tested in a bench scale reactor, where bisphenol A (BPA) and methyl green (MG) were present in the influent. The experiments carried out have shown very good results as more than 90% of bisphenol A (BPA) and 80% of the dye methyl green (MG) present in the influent were removed.

The university is looking for industrial partners willing to license the technology or further develop the technology.

Advantages and Innovations

- High elimination percentage rate of organic pollutants (i.e. BPA, MG,…)
- High stability of the system
- Low cleaning requirements

Stage of Development

Under development/lab tested

IPR Status

Patents granted

Comment Regarding IPR status

Spanish patent granted

Profile Origin

National or Regional R&D programme

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Send to Sector Group

Environment

Client

Type and Size of Organisation Behind the Profile

University

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

The university is looking for partners from the wastewater treatment field interested in licensing the technology or working together in the development of the technology.

Type of Partnership Considered

License agreement
Research cooperation agreement

A cost-effective and environmentally friendly technology for shore protection and stabilization

Summary

Ukrainian scientists developed a cost-effective and environmentally friendly technology for shore protection and stabilization based on the maintenance of ecosystem biodiversity as well as the ability of aquatic environment to self-purify.The developers seek collaborative partners (industry or academic) to adapt the technology to specific needs.They are looking for technical or research cooperation

Creation Date	27 September 2016
Last Update	24 October 2016
Expiration Date	24 October 2017
Reference	TOUA20160927002
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/e93edc5f-c480-4bcb-a22b-54310ffee39a

Details

Description

Abrasive shore areas are very dynamic zones that can be easily destroyed under the influence of water and wind erosion.Therefore, shore protection is one of the most reasonable method for the coast line stabilization.. Ukrainian scientists, who have more than 30 years' experience in enviromental engineering, jointly with one of the leading Ukrainian University developed a wide range of cost-effective and environmentally friendly shore protection structures.The solutions combine the ability of the structures to directly protect a section of the coast as well as to support and maintain beach filling/nourishment.Partners (industry or academic) interested in technology adaptation to specific needs are sought.The developers are looking for technical and research cooperation

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

University

Year Established

1930

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
Russian

Client Country

Ukraine

Partner Sought

Type of Partnership Considered

Technical cooperation agreement
Research cooperation agreement

Innovative technology for the removal of bio-refractory pollutants from wastewater.

Summary

A research group from a Catalan university has developed a new technology for the removal of bio-refractory compounds from industrial wastewater. It combines an advanced oxidizing process (AOP) and a physicochemical treatment in a single step. Operating costs are significantly lower than in conventional AOPs since a lower consumption of energy and oxidizing chemicals is required. Industrial partners interested in a license or a technical cooperation agreement are sought.

Creation Date	23 September 2016
Last Update	06 October 2016
Expiration Date	06 October 2017
Reference	TOES20160920002
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/5a0fca1c-b544-4102-8cff-e2aaf872a7ea

Details

Description

At present, various methods for treatment of wastewater are known to remove contaminants in order to reuse the water, such as physico-chemical, biological or incineration methods.

Advanced Oxidation Processes (AOP) are efficient methods to remove organic contaminants, specially indicated to remove bio-refractory pollutants (organic compounds that resist microbial degradation).

AOP methods are cheap to install, but involve high operative costs since a continuous input of expensive chemicals and/or energy is required. For this reason, in many cases, AOP methods are used only in the final stage of the wastewater treatment after a primary and secondary treatment. Moreover, AOP methods have some important drawbacks regarding their complexity.

A research group of a Catalan university with large experience in wastewater treatment has developed a new technology for treatment of bio-refractory pollutants that combines an AOP and a physicochemical treatment in a single step.

This method can consume either hydrogen peroxide or ozone as oxidizing agents. It is as much effective as conventional AOP (e.g. Fenton process) but is able to work in a wide range of pH (up to neutral) at room temperature and at atmospheric pressure.
Due to the lower consumption of chemicals and the low or non requirement of energy, this new method is much more cost-effective than current existing AOP processes. Only in the case of using ozone as oxidizer energy is required to generate the ozone.

The process rapidly and efficiently removes total organic carbon (TOC), chemical oxygen

demand (COD), suspended matter, colour, odour, cloudiness, ammoniacal nitrogen and toxicity. The treated water is also disinfected by its germicidal action.

This technology is able to effectively remove aromatic compounds, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), anilines, ammonia and nitrogen compounds.

It can be applied in the oil industry, chemical, pharmaceutical, metallurgical, automotive, residues (landfill leachates), food and beverage and concentrate recovery, among other industries.

The Catalan research group is looking for:

License agreement with industrial partners interested and able to further develop, industrialise and commercialise this technology.

Technical cooperation agreement with an industrial partner for a co-development of the technology and a further commercialization of this technology.

Advantages and Innovations

- It does not need such an acidic pH as the Fenton process does, so the consumption of acids and bases for subsequent neutralization is much lower.

- It can be carried out at room temperature (unlike incineration) and at atmospheric pressure (unlike wet oxidation or supercritical oxidation).

- Unlike the Fenton process and other AOPs, an excess of chlorides, bicarbonates, bisulfates or other radical scavenger substances or the presence of solids in suspension are not a problem for carrying out the process.

- Neither conductivity of the water (unlike electrochemical processes) nor water colour or transparency (unlike the photochemical processes, with visible light or UV lamps) has any effect on the process.

-The process does not require special materials (such as certain electrodes in electrochemical processes).

-The only investment cost worth pointing out is the ozone generator, only in case ozone is used as oxidizer.

- Operating costs are noticeably lower than those of incineration (due to the huge amount of energy required to evaporate all the water to be incinerated) or those of AOPs, which consume higher amounts of expensive oxidizers.

Stage of Development

Available for demonstration

Comments Regarding Stage of Development

The technology has been successfully applied in the laboratory to real wastewater samples and is ready to scale-up to industrial scale.

IPR Status

Patent(s) applied for but not yet granted

Comment Regarding IPR status

Spanish patent priority application.

Profile Origin

National or Regional R&D programme

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Send to Sector Group

Environment

Client

Type and Size of Organisation Behind the Profile

University

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

Industrial partner working in wastewater treatment are sought.

Industrial partners interested in a license agreement should further develop, industrialise and bring to the market this technology.

A Technical cooperation agreement with industrial partners will be also considered. The industrial partners should in this case be interested in a co-development of the technology (e.g. to adapt to specific needs) together with the Catalan research centre and in further industrialisation and commercialisation of the technology.

Type and Size of Partner Sought

SME 11-50,SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

License agreement
Technical cooperation agreement

A French company is looking for technical cooperation agreement for their innovative cleaning technology using supercritical carbon dioxide dedicated to mechanical industries

Summary

The French company has designed a cleaning equipment for an efficient degreasing and particles removal using supercritical CO2. This exclusive technology, combined with the expertise, offers to industrial manufacturers an alternative, competitive and respectful of environmental standards, compared to detergent or solvent processes used for mechanical parts cleaning in industry. The company is looking for technical cooperation agreement to develop the cleaning equipment with industrials.

Creation Date	19 October 2016
Last Update	21 October 2016
Expiration Date	21 October 2017
Reference	TOFR20161019001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/2fad185a-3889-468a-988a-cb4218c38471

Details

Description

The French SME has been created in 2012 in order to develop and market an innovative concept of an energy-guzzling, safe and environmental friendly cleaning equipment, after many years of research and development with French laboratories from the nuclear and mechanical industries and a gas supplier.
This new cleaning process is based on the use of supercritical carbon, replacing current polluting solvents condemned by REACH regulation.
The company designs, manufactures and sells machines for cleaning mechanical parts or fabrics. The purpose is to provide an efficient technology perfectly adapted to industrial processes at the lowest global cost. The company offers a safe and environmental friendly alternative technology to current polluting and energy-guzzling cleaning processes. This process doesn't require water, decreases by 50% energy consumption, and doesn't impact air quality.
Supercritical carbon dioxide has a density close to liquids and diffusivity close to gases. It allows to clean in depth pieces:
- All metallic materials without oxidation and most of polymers
- With any shape, even complex with small interstices and blind holes
- Any size, from very small pieces (watchmaking, electronics, bar turning and high precision parts) to bigger parts (aeronautics and car industries)

The French SME possesses a R&D machine able to perform cleaning tests at a pilot scale. This machine has got multiple options and is adapted to different cases. Hence, the company is looking for industrial partners who want to change their cleaning machines to environmentally friendly machines.
The technical cooperation is mainly centered on support for industrials in their new cleaning processes and finally finished on a dedicated equipment.

Advantages and Innovations

This innovative solution is meant to replace current machines using tetrachloroethylene, trichloroethylene, dichloromethane, oil derivatives and water detergents. The machines are supplied with liquid CO2, not produced specifically for this process but recovered from industrial activities and purified. CO2 is then heated and pressurized to reach the supercritical stage, CO2 becomes as dense as liquids and as diffuse as gases: a green solvent to allow efficient cleaning.
The advantages of CO2 are multiple: it's not corrosive, not harmful, not irritant, not carcinogenic, neither flammable nor combustive. This process allows to get rid of polluting and harmful solvents and to suppress water consumption. No more needs of cleaning and rinsing successive bins, there is only one equipment. The process is more efficient.
The machines are also flexible in their use (settings of pressure, temperature, cleaning time can be adapted to most of the requirements, additional ultra-sounds or agitation can be added if required). Currently, soluble oils are the most suitable to dense fluid but primary oils can also be treated.

Stage of Development

Already on the market

Comments Regarding Stage of Development

The first cleaning machine with supercritical carbon dioxide has been sold and delivered in 2016.

IPR Status

Patents granted

Comment Regarding IPR status

4 Current patents on the process or the technology

Profile Origin

Private (in-house) research

Network Contact

Issuing Partner

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2012

Turnover

<1M

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
German
French

Client Country

France

Partner Sought

Type and Role of Partner Sought

The French SME is looking for partners in the mechanical industry sector (SME - more than 10 employees, mid-caps and large industries) with a cleaning issue concerning mechanical parts. Partners should be ready to cooperate on a technical base and to provide samples of their products to clean.
The cooperation would consist in several steps, from defining the cleaning specifications of the partner, to the optimization of cleaning parameters and proposal of a specific equipment.
The technical cooperation agreement is the first step of the partnership.

Type and Size of Partner Sought

SME 11-50,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

Technical cooperation agreement

Attachments

3174.jpg

Established Slovak university has developed an additive for improving the cetane number in diesel or biodiesel fuels

Summary

A research team from an established Slovak university has developed an innovative additive for improving the cetane number of diesel and biodiesel fuels. Improvement of cetane number has a significant effect on the reduction of ignition delay of fuel engines. The additive is based on bio-components, making it possible to increase the quality of fully ecological fuel. The university is looking for partners through license agreement or commercial agreement with technical assistance.

Creation Date	23 September 2016
Last Update	14 October 2016
Expiration Date	14 October 2017
Reference	TOSK20160923001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/441653f7-fea6-4496-8610-0c07e168b4bb

Details

Description

Cetane number is a significant factor in the quality of the diesel fuels and has direct effect on reducing the fuel ignition delay after the injection into the combustion chamber. As a result of the short delay, the engine runs smoothly, with lower noise levels and decreased volume of flue gas in the exhaust phase. The production process of the fuel additive utilizes a product of renewable sources - glycerol, which is in surplus on the market, as it arises as a by-product of fatty acid methyl esters (bio-components for diesel fuel). Using the proposed additive helps to achieve the European Union limits on bio-component content in motor fuels. European Standard EN 590 prescribes minimal cetane number of 51 for produced diesel fuels. Using the proposed fuel additive allows you to increase the cetane number of fuel by several units.

The innovative diesel fuel additive is applicable in the production of oil-based diesel or biodiesel fuels. Improvement of the fuel quality has positive effects on the performance and operation of the engine, as well as on the environment, as it utilizes products of renewable sources.

The university is looking for partners - industrial companies - active in the field of oil-based diesel fuels and biodiesel fuels for future manufacturing and commercialization of the technology under licence agreement or for technical cooperation for the development and usage of the technology.

Advantages and Innovations

The main advantage of the proposed diesel or biodiesel fuel additive is the utilization of glycerol, as a product of renewable sources. Thus, the improvement of the fuel quality is also ecological, in accordance with the European Union limits on bio-component content in motor fuels. Lower manufacturing costs are expected in comparison to currently most used diesel fuel additive ethylhexyl nitrate.

Stage of Development

Available for demonstration

IPR Status

Granted patent or patent application essential

Comment Regarding IPR status

+ international PCT

Profile Origin

National or Regional R&D programme

Network Contact

Issuing Partner

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

University

Year Established

1939

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Slovak

Client Country

Slovakia

Partner Sought

Type and Role of Partner Sought

- Type of partner sought:

The university is interested in technology transfer with industrial companies, especially with the companies active in the field of oil-based diesel fuels and biodiesel fuels. Additional details are available on request. In 2014, this technology won the Slovak Price for Technology Transfer in a category "The Best Implemented Technology Transfer". The university is seeking industrial partners for collaboration on any of the following levels:
• Manufacturing and commercialization under license agreement - this additive based on bio-components helps to achieve the European Union limits on bio-component content in motor fuels. The technology is patented and international PCT was submitted.
• Technical cooperation for the development and professional use of the technology

- Specific area of activity of the partner:
Oil-based diesel fuels, biodiesel fuels

- Task to be performed:
- future technology transfer, the selling of the technology

Type and Size of Partner Sought

SME 11-50,SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

License agreement
Commercial agreement with technical assistance

Optical Sensor for gas fuel characterisation

Summary

An Italian start-up has developed a Smart Optical Integrated Analyser for natural gas for the monitoring of gas composition and quality, in order to prevent damages to the equipment and provide the safety of the working environment in the Oil and Gas industry. The company is looking for an industrial partner available to cooperate in the development of the final product supporting them in the industrialization phase of the sensor and willing to exploit its commercial potential.

Creation Date	19 October 2016
Last Update	19 October 2016
Expiration Date	19 October 2017
Reference	TOIT20161019002
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/3583a1da-3c5e-4d42-91c5-2f842ff75c90

Details

Description

In the Oil&Gas Industry (O&G) the monitoring of gas composition and quality has become a widespread necessity to comply with regulatory requirements, to guarantee the quality of their product output as well as obtain maximum efficiency of the industrial process, prevent damages to their equipment and provide the safety of the working environment.
To integrate real time precise and reliable information on gas composition is essential for the industrial processes of the O&G sector.

Today, to obtain the necessary information the following sensors are installed in several areas of production sites:
• Gas Chromatographers, (for LHV and gas mix)
• Wobbe Index meters; (Wobbe index and specific gravity)
• Flameproof gas analyzers; (dew point)
• Toxic gas detectors (NOX and CO emission)

Such sensors provide unrelated and non harmonized information.

Gas Chromatographers (GC) in particular present relevant limitations in their performances preventing the optimal use of production plants and are considered a problem to install and manage by production plant managers. An Italian start-up operating as an industrial platform to transform optic, photonic and spectroscopic research into marketable products, mainly in the field of biomedical devices, optical sensing equipment and microscopy, has developed a Smart Optical Integrated Analyser for natural gas (SOIA).

SOIA could replace all the sensors mentioned above, providing information in a quicker, more precise and reliable way.
Potential markets for SOIA are Turbines manufacturers and oil and gas extraction and

transportation companies which currently use a large number of gas chromatographers.

Regarding turbine manufacturers the company has been in contact with one of the biggest Oil & Gas Company, who declared its interest to adopt SOIA sensor in combination with their AE DLG Turbines, the new generation of aeroderivative turbines used to power O&G plants.

Regarding O&G producers, the company has also been in contact with one of the largest player in the field and they confirm their interest to adopt SOIA sensor in their extraction platforms and transportation pipelines.

The sensor is made of:
• A shock resistant body containing the light sources for the excitation of gas and a sensing camera to read spectra. Spectroscopy is a safe, consolidated and diffused technology applied mostly in the medical field and industrial field for material analysis. Not frequently applied to Gas and especially medium pressure Gas (70-200 bar)
• A fiber Probe: miniaturized fiber bundle combining multi optical functions together permits to send the excitation light and to read back the spectrum through a window of few millimetres in diameter.
• A Smart Analytics and Principal component analysis software. This is a fundamental ingredient of the sensor providing it with the capacity to recognize specific spectrum pattern from a pre-set database.

Advantages and Innovations

SOIA represents a very promising application with a large commercial potential considering that GAS sensing could be just the first step of a more complex modular smart sensing system capable to fully monitor the O&G environments through optical sensing technologies.

The Italian company is looking for an industrial partner available to cooperate in the development of the final product supporting them in the industrialization phase of the sensor and willing to exploit its commercial potential. The partner should be a medium-large manufacturer of equipment and instruments for the oil and gas industry.

Stage of Development

Concept stage

IPR Status

Secret Know-how

Profile Origin

Private (in-house) research

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2014

Turnover

<1M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
French

Client Country

Italy

Partner Sought

Type and Role of Partner Sought

Medium-large company, suppliers of material and equipment of Oil and Gas Industry, and sensors manufacturers . The partner should cooperate in the development of the final product supporting the start-up in the industrialization phase of the sensor and in the exploitation of its commercial potential.

Type and Size of Partner Sought

>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

Commercial agreement with technical assistance
Technical cooperation agreement

Research team is looking to collaborate with agrofood-related companies and industries on the operation of a prototype composting system and evaluation of the compost produced.

Summary

A Greek research team is developing a prototype household composting system which collects and composts organic waste at source. The technology aims to minimize the organic waste that ends up in landfills and at the same time produce high quality compost. The team seeks medium/large companies in the agrofood industry interested in implementing the method as part of their environmental management strategy through a research cooperation agreement or commercial agreement with technical assistance.

Creation Date	28 September 2016
Last Update	04 October 2016
Expiration Date	04 October 2017
Reference	TOGR20160928002
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/e074c50d-7b57-46e8-aea3-73c3b638cb28

Details

Description

Biodegradable organics comprise the major waste fraction generated by households and industries worldwide. In order to ensure the proper management of this waste stream, it is necessary to implement efficient practices and schemes that promote sustainability and that are based on the provisions and the principles of environmental policy and legislation.
The Greek laboratory team is working on the development of an integrated management system for biowaste whereby it evaluates the alternative management options for biowaste, based on their whole life cycle and the final quality of compost according to the characteristics of input materials and other operating parameters. Moreover, the research has expanded and includes the formation of the basis for establishing a market for compost in Greece. The team also aims to increase the environmental awareness and knowledge of citizens, authorities and other interested stakeholders of biowaste management.
A key element in the above aims has been the development and use of a prototype composting system specifically designed and constructed in order to support the separate collection and composting of biodegradable organic waste at source. The prototype system is based on the mechanical mixing/stirring of organic materials that are fed on a continuous basis through vertical flow and have a good performance with respect to the composting process and the operational characteristics.
The advantages of this method include reduced environmental impacts in terms of the

transporting and handling of organic waste, a clean high-quality feedstock and the uncontaminated product that leads householders and local people to realize its environmental benefits over the use of other market products (e.g. synthetic fertilizers).
The research team is looking for co-operations with companies in the agrofood industry that produce organic waste and are interested in implementing the method in their waste management processes, as part of their waste management strategy, through a research cooperation agreement or a commercial agreement with technical assistance.

Advantages and Innovations

The prototype composting system offers minimization of odours from the composting compartment during feeding of fresh organic material and avoidance of mixing fresh organic material with the composted material. It is simplified and fluent in the feeding procedure, while it collects the leachate and the compost on a continuous basis. Also, the agitation system works without any contact between the waste and the compost.

Stage of Development

Prototype available for demonstration

IPR Status

Secret Know-how

Profile Origin

Other

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Send to Sector Group

Environment

Client

Type and Size of Organisation Behind the Profile

University

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Certification Standards

ISO 9001
ISO 17025

Languages Spoken

English
Greek

Client Country

Greece

Partner Sought

Type and Role of Partner Sought

The research team is looking for cooperations with agricultural cooperatives, municipalities-regions and manufacturers (food industries, integrated livestock and poultry farms, dairy industry and milk processing units for producing products and integrated feed production units) that have organic by-products/waste in their processes in order to use/test the prototype composting system on an industrial and non-industrial scale for the technology to evolve

Type and Size of Partner Sought

251-500,SME 51-250,>500

Type of Partnership Considered

Commercial agreement with technical assistance
Research cooperation agreement

Passive sensor for detection of volatile sulfur compounds

Summary

A Spanish research group has developed a simple and easy-to-use passive colorimetric sensor with low detection limits and (45 mg/m3) good selectivity for in situ detection and real time monitoring of volatile sulfur compounds in real atmospheres. It can be used to detect bad bread or for environmental control purposes in critical locations. The university is interested in license and technical cooperation agreement with producers or distributors of sensors for volatile compounds detection.

Creation Date	20 October 2016
Last Update	24 October 2016
Expiration Date	24 October 2017
Reference	TOES20161020002
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/036c69ed-bd78-497b-8e30-c15d3f76478a

Details

Description

Volatile sulfur compounds such as hydrogen sulfide (H2S), methyl mercaptan (CH3SH) and dimethyl sulfide ((CH3)2S) are toxic gases, harmful to the environment and health. The main amounts of hydrogen sulfide and other volatile sulfur compounds are generated as a result of industrial activities such as processing and refining of oil / natural gas, wastewater treatment plants, landfills, etc. They also can be found in biological samples, such as breath, being responsible of halitosis.
For the determination of volatile sulfur compounds in situ and in real time, one possibility is to use active sampling techniques such as commercial colorimetric tubes. These dispositives require an external source of energy, thus an additional cost of energy and money needs to be considered.
Regarding passive sensors, few options exist for detecting volatile sulfur compounds and all have drawbacks such as excessively high detection limits, low reproducibility or the toxicity of the reagents employed. For halitosis detection a halitometer is used, which is a portable instrument that measures quantitatively the volatile sulfur compounds found in the mouth but it is inaccessible to the consumer due to their high cost.

Researchers from a Spanish university have developed a passive colorimetric sensor for in situ detection of volatile sulfur compounds with detection limits of 45 ppb (part per billion = mg/m3), making it suitable to use in the detection of sulfur compounds in real atmospheres. The sensor is passive, so it does not need any pretreatment, or power supply or external instrument. The sensor is further characterized by its safety to the environment, its stability against a wide range of temperatures and to humidity and solar radiation, and its resistance to reversion, so that the sensor response is stable over time. The sensor is useful for the determination of volatile sulfur

compounds in any type of matrix in which volatile sulfur compounds are present or generated, allows in situ and in real time monitoring and with good sensitivity. Moreover, the sensor has an appropriate selectivity since other volatile compounds such as amines, ethanol or acetone have been found not to interfere with the detection. Once the sensor is colored, the color intensity can be monitored by i) visual inspection, ii) digital analysis of the values of red, green and blue (RGB) from a photograph of the sensor obtained by a recording device or image capture as a mobile phone, iii) absorbance measurement by diffuse reflectance.

The sensor developed is applicable as in situ method for:
- the detection of bad breath that may be associated with periodontitis or gingivitis
- environmental control systems for the detection of hydrogen sulfide in critical locations (wastewater treatment plants, landfills, drains, pipes, oil processing, etc

The companies looked for should be active in the production and/or distribution of sensors for detection of volatile compounds. The university is mainly interested in license agreement, including testing of applications, adaptation to specific needs, production and marketing. However, the research group are also open to technical cooperation agreement to further develope their sensor.

Advantages and Innovations

The most innovative aspect of this invention is that allows in situ and in real time monitoring of volatile sulfur compounds.

While, the main advantages provided by the invention are:
- Simplicity and ease of use: it is a passive colorimetric sensor that does not require any kind of pretreatment or power supply or external instrument.
- Low cost: simple fabrication process without high costs
- Low detection limits: of the order of 45 ppb v/v. Other instruments in the market have orders of magnitude on the parts per million range (mg/L)
- Quantitative detection: direct quantitative detection can be carried out by diffuse reflectance of the sensors.
- Stability: the sensor remains stable for a period of 3 months. Reversion resistance.
- In situ and in real time monitoring: the response of the sensor is obtained in just 10 minutes.

Stage of Development

Under development/lab tested

IPR Status

Patent(s) applied for but not yet granted

Comment Regarding IPR status

Spanish patent application

Profile Origin

Other

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Send to Sector Group
Environment

Client

Type and Size of Organisation Behind the Profile

University

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

Enterprise in the specific area of sensing, scientific instrumentation, industrial safety, public safety, etc., for licensing the invention, testing of applications, adaptation to specific needs, production and marketing.

Type and Size of Partner Sought

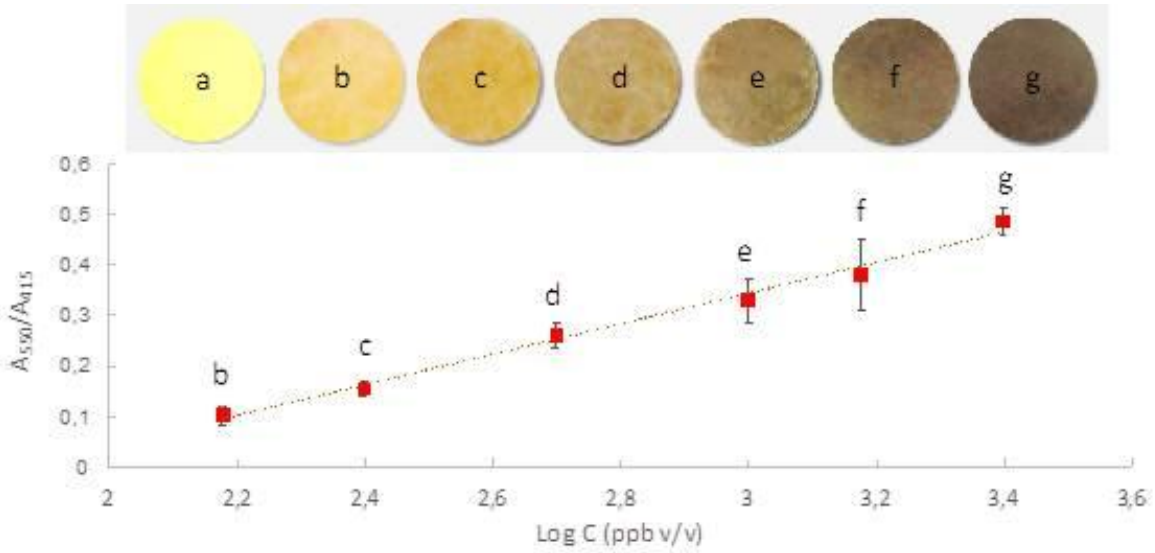
SME 11-50,SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

License agreement
Technical cooperation agreement

Attachments

201605R-Molins, C.jpg



R&D company seeks non toxic insect glues to be tested and spread on specific materials (cardboard/plastics)

Summary

In the frame of a new product development, a Brussels-based R&D company specialized in the development of ecological devices trapping domestic pests is looking for non toxic glues adapted to different insect species. The glues will be tested on different insect species. The SME seeks commercial agreement with technical support to spread the glue on specific materials (cardboard/plastics).

Creation Date	12 October 2016
Last Update	24 October 2016
Expiration Date	24 October 2017
Reference	TRBE20161012001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/0f96b0b1-6e81-4d04-90cb-c254c1e54994

Details

Description

The Brussels SME is a research and development company created in 2013 as a spin-off from a Belgian university. Their principal activity is the development and sale of ecological and safe products aimed at eradicating domestic pests like house dust mites, lice and bed bugs.
The company study the biology of these little pests, particularly the way they communicate with each other and the places they like to take refuge. Then, they mimic their communication (biomimicry) to lure them away from their normal refuge towards death traps.
The company do not use synthetic pesticides to kill these pests, so our traps pose no danger to your health.
The company has successfully launched a first product to the market: a product that traps dust mites and is an effective solution in the fight against allergies to dust mites.

The SME has developed a new model of device trapping on different species of insects. The novelty of the device is in its architecture. The company is now searching for different type of glue adapted to different insect species, mainly bed bugs, ants and roachs. The glues shall be aligned with the company principles of not using synthetic pesticides.

The company is looking for a glue provider that will ship glues to Belgium and will provide technical support to spread the glue on specific materials (cardboard/plastics). The partner will provide technical support via technical guidelines and/or phone helpdesk and/or onsite support to manually test the glue.

Technical Specification or Expertise Sought

The company seeks different types of glue to catch different types of insects in some traps - mainly bed bugs, ants and roachs.

The requested glues shall meet all the following specifications:
- must not dry out rapidly, for at least one month
- be translucent or transparent and odourless.
- be no toxic for human.
- not contain compounds that are attractive or repulsive for insects.
- comply with the company's policy of "no use of synthetic pesticies".

The glues should be spread out in a thin layer (maximum 0.2 mm).

The glues shall meet all the standards necessary to reach the EU and USA markets.

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Send to Sector Group

Environment

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Experience Comments

The company do not need an exclusive partnership. A patent has been applied for but not yet granted for the newly developed device. All the products are covered by trademarks.

Languages Spoken

English
French

Client Country

Belgium

Partner Sought

Type and Role of Partner Sought

The glue provider is expected to provide the Brussels SME with glues meeting all the requirements previously described.
A technical help to spread the glues on specific materials (plastics/cardboards) will also be asked.

Type of Partnership Considered

Commercial agreement with technical assistance

enterprise europe network

Medio Ambiente:

Agua y Residuos

EUROSTARS - Company sought to test specific bacterial cultures for biogas production from agro-industrial waste

Summary

A Spanish spin-off devoted to R&D in the biotechnology field is specialised in the improvement of the biogas processes. The company has developed a methodology to increase the production of biogas in organic waste treatment plants. For an application within the EUREKA-EUROSTARS program, the company is looking for strategic partners in charge of the construction and management of biogas plants willing to test and validate the methodology to improve the profitability of their plants.

Creation Date	14 October 2016
Last Update	14 October 2016
Expiration Date	14 October 2017
Reference	RDES20161014001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/b2886b85-4e70-4bb1-927c-a0d8d15cd09a

Details

Description

A Spanish company is specialised in the implementation of pre-treatments and the improvement of the biological reaction of anaerobic fermentation, both in laboratory and at pilot scale, which maximizes the biogas production of any residue. By using this methodology it is possible to develop feasible and sustainable projects that ensure economic and environmental stability of the waste generating industries, reducing the consumption of electricity and / or heat and solving the problem related to waste management.

The company will apply to the next call of the Eureka-Eurostars program. The aim of the project is to improve the agro-industrial waste treatments by characterization, isolation and cultivation of bacteria involved in the process of anaerobic digestion. This would allow to increase the energy efficiency of biogas plants and to reduce their operation times. Specifically, the new methodology suggested would increase the production of methane, reduce the time of acclimatisation and increase the profitability for self-consumption.

In this sense, the partner involved in the project would be the first direct beneficiary since bacterial cultures would be generated according to the specific substrate that enters into his plant instead of using sludge not adapted to the residue to be treated (traditional method).

It is foreseen the participation of the Spanish company and another European company. Since the project aims at improving the profitability of biogas plants by developing specific methanogenic bacteria, it is essential the collaboration with companies managing numerous plants and producing agro-industrial waste, particularly pork slaughterhouses and oil mills. In

particular, the company sought should be interested in testing in its facilities specific bacterial cultures for biogas production and validating the suggested methodology.

Call deadline: 2nd March 2017
The deadline for Expressions of Interest is 15th November 2016
Anticipated duration of the project: 20 months

Advantages and Innovations

The physiochemical conditions for a proper anaerobic digestion are well known. On the contrary, methanization is carried out entirely by bacteria and their role is the least known but the one that offers greater potential for the optimization of biogas generation. From the point of view of microbiology, methanogenesis is a complex process which causes that digesters take a long time to reach the operation steady state, and, in case of substrate composition change, bacterial biodiversity involved in the process has to acclimatize again, and even digestion is in danger of inhibition. Moreover, the low yield of current technologies does not allow to amortize self-consumption biogas facilities. For these reasons the new methodology suggested, adapted to each specific residue, enables users to reduce operation times between 15% and 50% and to increase biogas production between 35% and 45%, making therefore profitable this type of facilities with an investment rate of return between 5 and 7 years.

Technical Specification or Expertise Sought

In order to ensure the success of the project, it would be advisable that the partner sought has large experience in the management of biogas plants and owns a reasonable number of them in several countries or have growth expectations in the short-medium term.
Moreover, the partner sought should be interested in biogas self-consumption and, therefore, in the acquisition of innovative technology or the adoption of new methods to improve its production process.
Finally, previous experience in European R&D projects would be preferable.

Stage of Development

Proposal under development

IPR Status

Secret Know-how

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2013

Turnover

<1M

Already Engaged in Trans-National Cooperation

No.

Certification Standards

ISO 9001

Languages Spoken

English
Spanish
Italian

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: Industrial partners specialised in the construction, management and maintenance of biogas plants for waste treatment, including owners of plants in different countries willing to face the challenge of waste management in origin and self-consumption at the point of generation.

- Specific area of activity of the partner: Bioenergy.

- Task to be performed: The partner sought should be able to test and validate the methodology in its industrial plants.

Type and Size of Partner Sought

SME 11-50,SME <10,SME 51-250

Type of Partnership Considered

Research cooperation agreement

Urgent - INTERREG North-West Europe (NWE) region – communities operating a bio-waste digestion plant that can be used for pilot runs are sought

Summary

A German university is preparing a proposal under the INTERREG NWE call. Aim of the project is to provide an interregional network based on demonstration facilities that will guide operators and communities towards demand-oriented electricity production from bio-waste. The consortium is looking for communities from NWE countries having high potential for bio-waste digestion. These communities should already operate a bio-waste digestion plant that will be used for pilot runs within the project.

Creation Date	10 October 2016
Last Update	10 October 2016
Expiration Date	10 October 2017
Reference	RDDE20161010001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/bc376b0d-26a3-4369-93e8-196e278cecb0

Details

Description

Within the next 10 years around 650 new bio-waste digestion plants will be commissioned mainly in the North-West Europe (NWE) region. In order to improve the energy efficiency from bio-waste digestion, the operation mode of the plants has to be shifted to a more flexible i.e. demand-oriented operation mode. Experience based on agricultural biogas plants in Germany, shows that on system level the shift allows for providing balancing capacity for the increasing injection of fluctuating renewables thus meeting the requirement of the changing energy market in NWE. On operator level preliminary research of a German university shows that demand-oriented operation of bio-waste plants will increase revenues as produced electricity is sold during peak time thus peak prices.
The experience with demand-operation gained in the agricultural sector in Germany however cannot be used as a blueprint solution for bio-waste digestion plants as the latter greatly differ in input material, technology and purpose. Thus in order to decrease the investment risks for potential bio-waste plant operators in the NWE region, profound techno-economic knowledge on the impact of demand-oriented operation mode is indispensable. Therefore the German university is preparing a proposal under the INTERREG NEW on resource and material efficiency which aims to establish a transnational network of bio-waste digestion demonstration plants which will successfully guide operators and communities towards flexible operation of bio-waste plants by providing instruments for techno-economic support where country specific framework conditions will be considered.

Outreach instruments include:

-simulation tool, available online
-trainings, on-site visits
-business plan, financial support schemes

So far the consortium consists of a German university, a German biogas association and a French engineering service provider specialized among others in the field of waste management.

To complete the consortium the university is looking for 4 communities from 4 different countries to establish a network of demonstration plants. The communities should already operate a bio-waste digestion plant which can be used for pilot runs. The communities should be located in NWE countries (Belgium, Netherlands, Luxembourg, France, United Kingdom, Ireland, Switzerland).

Deadline of the call: 18th November 2016
Deadline for EoIs: 20th October 2016

Stage of Development

Proposal under development

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Send to Sector Group

Environment

Restrict Dissemination to Specific Countries

Belgium, France, Ireland, Luxembourg, Netherlands, Switzerland, UnitedKingdom,

Client

Type and Size of Organisation Behind the Profile

University

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
German

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: communities from NEW countries
- Specific area of activity of the partner: Operator of a bio-waste digestion plant
- Tasks to be performed by the partner: perform pilot runs within the project

Type of Partnership Considered

Research cooperation agreement

H2020 FOF-10-2017: Partners sought for customization and reutilization of mobile devices based on single components, complete circuits as well as whole devices with or without display

Summary

The project is about modifications and reuse of high-end devices (e.g. mobile phones) or parts of them. This can be done either on the component and circuit level or by using the devices as a whole in an application. The objective is to realize a pilot process chain. Partners should be experienced in developing consumer electronics or recycling high-end devices. The project will be submitted to the EU H2020 program FOF-10-2017 and coordinated by a research facility in Germany.

Creation Date	02 September 2016
Last Update	07 October 2016
Expiration Date	07 October 2017
Reference	RDDE20160902001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/cc2e2ddd-b290-4aa6-8a85-b0ce35e527e3

Details

Description

The research domain is a mix out of development of electronics and informatics as well as production and reuse/recycling technologies. The development of electronics focuses on the implementation of small add-ons or stand-alone devices with new hardware, whereas the software is needed to add new methods and functionalities, as well as in the computer vision and artificial intelligence domains. The production parts cover the fabrication of these devices with focus on economical and reliable processes. The end-of-life part is covered by the recycling technologies, which are researched in order to enable the extraction and reuse of components or circuits.
Useful results would be methods to extract and modify components from high-end devices and pilot devices employing those components. By supplying parts or whole devices to a new use, typically two targets are reached: First, the user is allowed to customize his devices according to his wishes. Then, the devices are used for a longer period leading to a more economical and environmentally friendly life cycle.
To reach these targets, specific add-ons for the devices should be developed in order to enable customization of the devices, e.g. a camera add-on or a network interface. These add-ons should be developed to cover a wide range of applications. Possible options are simple data loggers as well as network extensions and surveillance tasks or assistive devices for elderly. The add-ons will focus on the most used devices and operate under typical operating systems. In this region some research was already done, such as the development of a parcel butler

based on a smart phone. Additional ideas for reuse like home automation applications or the reuse of components and electronics of partly damaged hardware are currently under research in small scale.
The described modifications can be implemented using software or hardware extensions. Therefore, partners are sought with experience in developing home automation electronics or adjacent fields. In order to cover the complete process chain another research topic targets the production of devices focused on future modifications. Partners from this field should cover some production capabilities concerning electronics. On the other hand, the reuse of components or circuits of damaged devices are also important for this project. To cover this topic a pilot plant for detection of valuable components was realized. Nevertheless, partners with experience in the reuse and recycling sector are most welcome, as it is planned to develop a plant in an industrial environment.
The founding program is part of the cross-cutting activities within the EU research program H2020. The framework conditions consist mainly of the complete coverage of the process chain as well as inclusion of at least 3 partners from different countries, out of whom the project coordinator is one. Beside these international conditions, the developed technologies should lead to a reduction of the time to market and the manufacturing costs of personalized products. Moreover, the technologies should be environmentally friendly and rather flexible in their use. The EU commission considers an average contribution of around EUR 5 million appropriate for these topics.
The project coordinator is head of a laboratory with focus on development of electronics and informatics and part of a wider research network realizing reuse projects. Besides the coordinator, there are several small-scale business contacts within Germany from different regions. The contacts are from different regions, e.g. small scale production or recycling. The requested partners should cover part of the process chain indicated above. Needed capabilities range from development skills in household electronics to informatics, from production to recycling and reuse of electronic components.
Call deadline: 19th January 2017
EOI deadline: 12th December 2016

Stage of Development

Proposal under development

Comments Regarding Stage of Development

There is a prototype showing the possibilities of reuse of mobile devices. This prototype meets the TRL6 criteria for the EU-Call as well as the classification "Prototype available for demonstration". Moreover a pilot plant in the reuse/recycling section for detection and extraction of components on different kinds of hardware is there. The pilot plant meets the TRL5 criteria.

IPR Status

Other

Comment Regarding IPR status

For the customization part the project is focused on developing software or simple hardware extensions, such no rights are reserved nor required.
In the recycling section typical industrial hardware should be employed, e.g. sensors or conveyors. The main development will focus on software, so patents are not required here, too.

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person

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Open for EOI : Yes

Dissemination

Restrict Dissemination to Specific Countries

Austria, Belgium, CzechRepublic, Denmark, France, Netherlands, Poland, Sweden, Switzerland,

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

1995

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
German

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

Type: Industry, home automation
Role: Co-development of appliances compatible to mobile devices
One part of the project is to develop appliances and interfaces to connect mobile devices to other hardware for customization purposes, e.g. home automation. One idea is to implement

used high end devices like smartphones as control unit for surveillance applications. The smartphone could be used as main component in a baby monitor or remote camera. The other possible option is to use the device as management system for different slave units, e.g. list all active electrical sockets. Partners from this region should be experienced with developing and producing home automation applications and devices within Internet of Things (IoT). Mutual benefits would be the elaboration of joint ideas and additional concepts as well as the commercialization of the devices.

Type: Industry, elderly assistance systems
Role: Co-development of appliances compatible to mobile devices
Another part is the support of the elderly by supplying assistance systems to mobile devices. One example is the implementation of an emergency button in combination with voice recognition. A device equipped with such an extension could start an emergency call to a predefined number, if it detects irregular behaviour or an emergency. Other possible options include the development of automated administrations of medications. Such a device could notify the operator of necessary ingestions at different times. Reasonable healthy elderly can be assisted in their daily life by voice navigation focused on older people or by connectivity to home automation and IoT. An example could be a notification in case of a stove plate or gas heater left on. Less dangerous things could be finished washing machines. Partners should be experienced with serving elderlies needs and interested in working on this field. Optional benefits would be connections to health insurances.

Type: Industry or academia, recycling
Role: Co-development of plant for high-end devices
The reuse and recycling part is of great importance to this project. The reuse is planned on several levels. In case of full functionality of the device the complete reuse is intended. On the next level useful components should be extracted. Examples are displays, circuit parts or accumulators. The lowest level reuse is taking place on a component basis. Partners should be familiar with the withdrawal and handling of used high end devices. As it is planned to test for functionality and, if negative, disassemble and reuse parts, experience with this steps is useful and recommended.

Type: Industry, production of mobile devices
Role: Co-development of customization options for mobile devices
In order to cover the complete value chain producers of mobile devices are searched as partners. Possible interactions could be the providing of mobile devices, used or otherwise, as well as the support for developing interfaces for the smartphones. A mutual benefit would be the collaboration for allowing different specialisations of the devices.

Type and Size of Partner Sought

SME 11-50,University,Inventor,R&D Institution,SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

Research cooperation agreement

System based on nanoparticles to remove organic recalcitrant pollutant.

Summary

A Spanish university has developed a new system based on nanoparticles to remove organic micropollutants from industrial efluents or wastewater treatment efluents. The system based on ligninolytic enzymes immobilized using magnetic nanoparticles has shown very good results in a bench scale reactor. The university is looking for partners interested in licensing the technology or working together in the development of the technology.

Creation Date	14 October 2016
Last Update	25 October 2016
Expiration Date	25 October 2017
Reference	TOES20160623001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/0d06908f-4439-4d2a-8fd0-eaa2082b282b

Details

Description

The discharge into the aquatic environment of organic recalcitrant pollutants from wastewater treatment plants is a major environmental problem due to the possible adverse effects that these chemicals have on animals, plants and people. Among these, a group of micropollutants of natural and anthropogenic sources (e.g. pharmaceuticals, pesticides, cosmetics and personal care products, flame retardants, hormones and other industrial chemicals) may potentially alter the functions of endocrine system and therefore, cause adverse effects on an organism or its progeny. On the other hand, the use of synthetic chemical dyes in various industrial processes, including paper and pulp manufacturing, plastics, dyeing of clothes, leather treatment and printing, results in the release of dye-containing industrial effluents with recalcitrant nature.

Conventional systems of wastewater treatment are not designed to remove these compounds, and their removal is only partial. The technology developed by the Spanish university was adapted to remove these kinds of pollutants.

The invention comprises an organic recalcitrant pollutant removal system based on the use of ligninolytic enzymes. The enzymes are immobilized using magnetic nanoparticles. The system was tested in a bench scale reactor, where bisphenol A (BPA) and methyl green (MG) were present in the influent. The experiments carried out have shown very good results as more than 90% of bisphenol A (BPA) and 80% of the dye methyl green (MG) present in the influent were removed.

The university is looking for industrial partners willing to license the technology or further develop the technology.

Advantages and Innovations

- High elimination percentage rate of organic pollutants (i.e. BPA, MG,…)
- High stability of the system
- Low cleaning requirements

Stage of Development

Under development/lab tested

IPR Status

Patents granted

Comment Regarding IPR status

Spanish patent granted

Profile Origin

National or Regional R&D programme

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Send to Sector Group

Environment

Client

Type and Size of Organisation Behind the Profile

University

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

The university is looking for partners from the wastewater treatment field interested in licensing the technology or working together in the development of the technology.

Type of Partnership Considered

License agreement
Research cooperation agreement

Reliable, robust heat flux sensor for combustion engines, flame jets and incineration plants

Summary

A Swiss university of technology offers a robust heat flux sensor for applications in combustion engines, flame jets, incineration plants and similar. The sensor can detect heat flux under extreme conditions. Unlike existing sensors it measures heat flux from an intense and temporally fluctuating heat source accurately and can easily be integrated into existing mounts. A licensing partner who develops the prototype to an industrial product and introduces the sensor to the market is sought.

Creation Date	20 September 2016
Last Update	13 October 2016
Expiration Date	13 October 2017
Reference	TOCH20160915001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/048f61dc-1745-4178-a244-d8b6e85d924f

Details

Description

A typical problem for a conventional heat flux sensor, e.g. Gardon gauge or transverse heat flux sensor, is the reliability of the measurement when the heat flux has a non-uniform distribution over the sensor surface or the sensor is not centered with respect to the heat flux source. Other sensors, e.g. Slug-calorimeter, require special electronics or affect the temperature distribution of the probe material, e.g. water cooled calorimeter, or cannot withstand thermal stresses in harsh conditions, e.g. thermopile. None of the aforementioned sensors are useful for the measurement of the heat flux from an intense and temporally fluctuating heat source producing an asymmetric heat flux with respect to the sensing element.

Detailed Description
The sensor developed by a Swiss university is chemically resistant, mechanically robust and has low thermal inertia. Currently there are no sensors on the market for the accurate measurement of the heat flux from an intense and temporally fluctuating heat source producing an asymmetric heat flux with respect to the sensing element. The design of the sensor is simple and robust and can easily be integrated into existing mounts.
It uses a modified differential thermocouple for the heat flux measurement. Thermocouples rely on the Seebeck effect, where an electrical potential can be measured when two different metals are brought into contact. The effect is temperature dependent. The invention is a sensing element built with two or more thermoelectrical junctions. The signal from these junctions can be acquired individually or manipulated to obtain their difference. An insulator separates electrically the sensing element from its external environment (see figure).

Using the appropriate electronics, the sensor is able to detect heat flux as the one produced by the thumb of a human being (37°C) pressed on its surface initially at room temperature (25°C).

The same sensor can also be exposed to the highly exothermic flame-jet produced by the fast oxidation of acetylene with pure oxygen (> 1000°C).

Application
· Measurements in incineration plants
· Monitoring aircraft engines
· Control of flame jets
· Experiments with supercritical water

Partnership
A licensing partner is sought in the sensor market who supplies the different markets. The industrial partner will have access to the existing prototypes from the university lab and is expected to develop the prototype to an industrial product and introduce the sensor to the market (e.g. for incineration plants, aircraft engines, flame jets, …).

Advantages and Innovations

Detection of heat flux under extreme conditions:
• Temperature: -180 - 1200 degree Celsius
• Robust and simple design
• Easy integration into existing mounts and set-ups due to the flexible dimension of the sensor
• accurate measurement of the heat flux from an intense and temporally fluctuating heat source producing an asymmetric heat flux with respect to the sensing element. Currently there are no such sensors on the market
• the sensor is not powered, meaning it is fail-safe and there is no risk of electrical breakdown related to a faulty sensor

Stage of Development

Prototype available for demonstration

IPR Status

Patent(s) applied for but not yet granted

Comment Regarding IPR status

patent pending (PCT)

Profile Origin

Private (in-house) research

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Send to Sector Group

Environment

Client

Type and Size of Organisation Behind the Profile

University

Year Established

1855

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
German

Client Country

Switzerland

Partner Sought

Type and Role of Partner Sought

The specific area of activity of the partner:
- Developer and manufacturer of sensors

The tasks to be performed by the partner sought:
- develop the prototype to an industrial and marketable product
- introduce the new product to the market (e.g. for incineration plants, aircraft engines, flame jets or similar)

Type and Size of Partner Sought

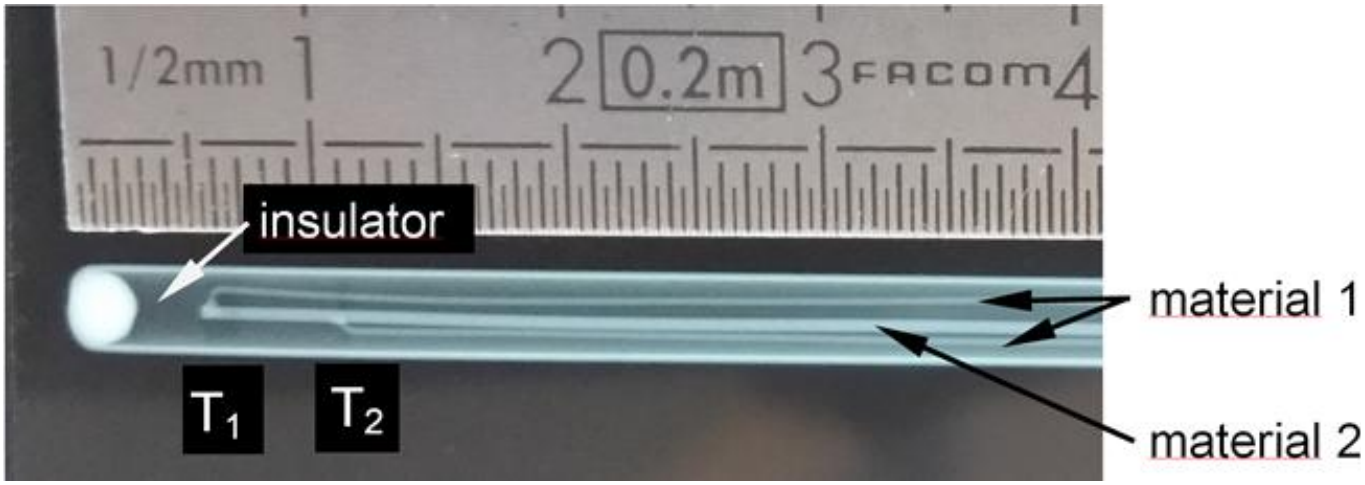
SME 11-50,SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

License agreement

Attachments

figure.png



Plasma torch to reach ultra high temperatures without fossil fuels

Summary

A French industrial company has developed a new technology called the plasma torch, which allows high temperatures to be reached without fossil fuel. Applications include waste recovery, safe asbestos destruction and renewable energy production. License agreement is sought.

Creation Date	21 September 2016
Last Update	17 October 2016
Expiration Date	17 October 2017
Reference	TOFR20160806002
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/f6797bc4-e2c1-483d-b2e5-e055b77c4e13

Details

Description

A French group has built up for 20 years a specific know-how based on a proprietary technology called the plasma torch, which allows high temperatures to be reached without fossil fuel. The French company's business consists of developing, construction and operating numerous applications of the plasma torch to benefit mankind and his environment. Today, the Group's three divisions all use this proprietary technology: 1°) First, the industrial division, which includes design, manufacture and marketing of multi-sector plasma solutions 2°) the asbestos removal division, which includes recovery applications of asbestos waste from the construction industry, and 3°) finally, a renewable energy division, which involves turnkey supply and operation of clean energy generation facilities, a highly strategic business positioned at the heart of the energy transition.

The French company currently operates an asbestos waste vitrification industrial facility with an annual capacity of 8,000 tons.

Vitrification is the only process available for producers and holders of asbestos waste fully guaranteeing: the destruction of asbestos waste according to current regulation in France, the elimination of unsafe effects of asbestos waste, therefore freeing producers and initial holders of asbestos waste from their liability. The use of landfills to dispose of waste is more and more limited today, in all geographies. Transportation and landfill costs (considering the limited number of Class I landfill facilities available) are expected to grow in the near future, encouraging communities and industrial companies to find more environment-friendly solutions.

The French company also provides sustainable electricity production from waste & biomass gasification using the plasma torch. This process transforms waste into BioSynGas (syngas) through gasification. The high temperature generated from the plasma torch enables to produce a very pure syngas of which is appropriate to power a turbine or gas engine to generate

electricity.

Complementing existing waste sorting, recycling and composting processes, it provides: - electrical efficiency which can reach 40%, - minimal environmental impact with very limited emissions and ultimate residue, - compatibility with a wide range of fuel, - local, constant and reliable production, compact facilities which are better accepted by local communities. The Group’s ambition is to become a major player in renewable energy from waste or biomass.

License agreements are currently sought with European partners for the technologies described. This technology could easily be implemented at any European's partner premises, depending on the volume of waste and abestos to be processed on site. Partners could benefit from several years of developement and complete technical assistance. All they'd need to do is to establish a clear list of feed material specifications, ensure power supply stability over time on the processing site, and control environmental outputs to make sure any harmful residue is avoided and / or contained.

Advantages and Innovations

A plasma torch transforms electrical energy into high-density thermal energy, which can reach up to 9000°F – the temperature at the surface of the sun. A plasma torch is a proficient thermal tool that can replace fossil fuel burners with an efficiency reaching up to 85%. Applied to waste treatment, a plasma torch enables the complete destruction of waste: organic compounds are completely converted into synthesis gas (syngas) and inorganic compounds are transformed into inert glass that can be valorized and sold as aggregate or a compound for road works. The plasma torch is of interest to any type of heat treatment as it provides ease of operation and reduces costs because of a stable energy price. In addition, the plasma will not cause any form of incineration. Example of hazardous waste: waste incineration ashes, water treatment units sludge, special industrial waste.

Plasma units are sold to industrial clients manufacturers as subparts of a larger facility, and are usually supported by operational maintenance contracts. The French company sells export licenses for specific region/territories, such as in recent years in Japan, South Korea and China. License agreements are sought with other European partners.

Stage of Development

Already on the market

IPR Status

Secret Know-how,Design Rights,Patents granted,Exclusive Rights

Comment Regarding IPR status

Patents are granted worldwide.

Profile Origin

Other

Network Contact

Issuing Partner

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

1992

Turnover

<1M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
French

Client Country

France

Partner Sought

Type and Role of Partner Sought

Any European industrial company interested in the potential implementation of such technologies on their local markets. License agreements are sought. The French company would provide full technical and commercial support with turn-key experience for the end user.

Type and Size of Partner Sought

SME 11-50,251-500,SME 51-250,>500

Type of Partnership Considered

License agreement

Attachments

torche.jpg

torche-plasma.jpg

Research team is looking to collaborate with agrofood-related companies and industries on the operation of a prototype composting system and evaluation of the compost produced.

Summary

A Greek research team is developing a prototype household composting system which collects and composts organic waste at source. The technology aims to minimize the organic waste that ends up in landfills and at the same time produce high quality compost. The team seeks medium/large companies in the agrofood industry interested in implementing the method as part of their environmental management strategy through a research cooperation agreement or commercial agreement with technical assistance.

Creation Date	28 September 2016
Last Update	04 October 2016
Expiration Date	04 October 2017
Reference	TOGR20160928002
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/e074c50d-7b57-46e8-aea3-73c3b638cb28

Details

Description

Biodegradable organics comprise the major waste fraction generated by households and industries worldwide. In order to ensure the proper management of this waste stream, it is necessary to implement efficient practices and schemes that promote sustainability and that are based on the provisions and the principles of environmental policy and legislation.
The Greek laboratory team is working on the development of an integrated management system for biowaste whereby it evaluates the alternative management options for biowaste, based on their whole life cycle and the final quality of compost according to the characteristics of input materials and other operating parameters. Moreover, the research has expanded and includes the formation of the basis for establishing a market for compost in Greece. The team also aims to increase the environmental awareness and knowledge of citizens, authorities and other interested stakeholders of biowaste management.
A key element in the above aims has been the development and use of a prototype composting system specifically designed and constructed in order to support the separate collection and composting of biodegradable organic waste at source. The prototype system is based on the mechanical mixing/stirring of organic materials that are fed on a continuous basis through vertical flow and have a good performance with respect to the composting process and the operational characteristics.
The advantages of this method include reduced environmental impacts in terms of the

transporting and handling of organic waste, a clean high-quality feedstock and the uncontaminated product that leads householders and local people to realize its environmental benefits over the use of other market products (e.g. synthetic fertilizers).
The research team is looking for co-operations with companies in the agrofood industry that produce organic waste and are interested in implementing the method in their waste management processes, as part of their waste management strategy, through a research cooperation agreement or a commercial agreement with technical assistance.

Advantages and Innovations

The prototype composting system offers minimization of odours from the composting compartment during feeding of fresh organic material and avoidance of mixing fresh organic material with the composted material. It is simplified and fluent in the feeding procedure, while it collects the leachate and the compost on a continuous basis. Also, the agitation system works without any contact between the waste and the compost.

Stage of Development

Prototype available for demonstration

IPR Status

Secret Know-how

Profile Origin

Other

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Send to Sector Group

Environment

Client

Type and Size of Organisation Behind the Profile

University

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Certification Standards

ISO 9001
ISO 17025

Languages Spoken

English
Greek

Client Country

Greece

Partner Sought

Type and Role of Partner Sought

The research team is looking for cooperations with agricultural cooperatives, municipalities-regions and manufacturers (food industries, integrated livestock and poultry farms, dairy industry and milk processing units for producing products and integrated feed production units) that have organic by-products/waste in their processes in order to use/test the prototype composting system on an industrial and non-industrial scale for the technology to evolve

Type and Size of Partner Sought

251-500,SME 51-250,>500

Type of Partnership Considered

Commercial agreement with technical assistance
Research cooperation agreement

Biological tower for the treatment of industrial gases and odors

Summary

A Portuguese waste water and gas treatment SME is offering a biological treatment tower for industrial gases and odours that removes more than 99% of gases. It requires only 25% of the area of traditional biological filters and it is environmentally sustainable. The company is open to negotiate a commercial agreement with technical assistance, financial agreement, joint venture, services agreement and/or a technical cooperation agreement with entities that need to treat their gases and odours.

Creation Date	30 September 2016
Last Update	21 October 2016
Expiration Date	21 October 2017
Reference	TOPT20160930001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/e49a1e04-95fa-434a-bcae-274a588352b0

Details

Description

A Portuguese waste water and gas treatment SME is offering a biological treatment tower for industrial gases and odours that removes more than 99% of gases such as ammoniac, hydrogen sulphide, volatile organic compounds, etc. It consists of a modular biological tower in reinforced fiberglass, mounted in situ, that uses heather, coconut fibre, bark, wood chips, etc. as a substrate, making it environmentally sustainable. It occupies only 25% of the area of traditional biological filters and has twice the efficiency.

The modular system used by the company allows it to install rugged and simple towers with a capacity of 200 m3 that are able to treat up to 40,000 Nm3 / h of industrial gases. The modular system and the towers can be installed in series or in parallel in order to better handle higher flow rates. It does not use hazardous chemicals (sulphuric acid, sodium hydroxide, bleach, etc.) as it happens in traditional systems, and does not produce hazardous leachate, as chemical scrubbers. The organic substrate is irrigated in a controlled environment and the only consumables are water and organic substrate (which can last up to 3 years), and has low power consumption, making it a robust solution and with low operating costs.

The biological treatment tower can be applied in all kinds of food industry, slaughterhouses, animal by-products industries, composting plants, waste water treatment plant, poultry, piggeries, cattle farms, etc. and the company has been working mainly with the industry and municipalities in order to install its own treatment systems.

The company is looking to establish a commercial agreement with technical assistance (e.g. assembly, engineering, technical consultancy, quality control, maintenance), a financial

agreement, a joint venture, a services agreement and/or a technical cooperation agreement (e.g. joint development, adaptation to specific needs, testing for new applications) with partners that need to treat their gases and odours.

Advantages and Innovations

The main advantages of the biological treatment tower are as follow:
- It is a modular construction in prefabricated panels of reinforced fiberglass and, therefore, it is lighter than most traditional biological filters and can be easily installed in any place.
- It has a chimney dispersion of the treated gases to more than 10 m from the ground, unlike conventional filters, which disperse the gases near the soil
- It is a robust and compact structure and can be installed in series or in parallel in order to better handle higher flow rates
- It consumes little water
- There is a uniform distribution of the gases within the tower, increasing its efficiency (twice as much when compared with conventional systems)
- It is based on system swap boxes arranged in floors filled with organic substrate which can be removed through a simple forklift, which makes it very easy to replace the substrate
- Its user can have electronic control of pneumatic and hydraulic valves and the main parameters (ammoniac, hydrogen sulphide, volatile organic compounds, temperature and humidity)

Stage of Development

Already on the market

Comments Regarding Stage of Development

The biological treatment tower was successfully tested in a composting plant, a fish scraps processing plant and an animal by-products processing factory in Portugal. The scale up was made and the solution is already available on the market, with many projects being prepared.

IPR Status

Patent(s) applied for but not yet granted

Profile Origin

Private (in-house) research

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Send to Sector Group

Environment

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2007

Turnover

<1M

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
French
Portuguese
Spanish

Client Country

Portugal

Partner Sought

Type and Role of Partner Sought

The company is looking for partners such as industries that need to treat their gases and odours, gas treatment technology installation companies, representatives and commercial agents.

Potential partners must be interested in acquiring and/or commercialising the biological treatment tower through the establishment of a commercial agreement with technical assistance (e.g. assembly, engineering, technical consultancy, quality control, maintenance), a financial agreement, a joint venture, a services agreement and/or a technical cooperation agreement (e.g. joint development, adaptation to specific needs, testing for new applications).

Type of Partnership Considered

Services agreement
Financial agreement
Commercial agreement with technical assistance
Technical cooperation agreement

Joint venture agreement

Patented mobile liming machine for the treatment of ground wastes on worksites

Summary

A French company has developed a mobile machine for the treatment of ground wastes (loam and mud) on worksites, transforming ground debris to a reliable & homogenous material. That patented machine has three variants according to the volume of treated materials. License (or sales) agreement of that patent is offered to an industrial firm having activity in manufacturing of machines / public works materials, or in the recycling or quarries-related sectors.

Creation Date	01 September 2016
Last Update	03 October 2016
Expiration Date	03 October 2017
Reference	TOFR20160901001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/cef86b04-cd5c-4139-9bea-9f590a771566

Details

Description

A French company has developed and patented a moveable machine for the treatment of ground wastes of worksites (landfills, loam and mud).
The price of landfills, the materials from careers and the price of transportation are becoming increasingly expensive; the process developed is capable of solving these issues by reducing all costs, eliminating transport and CO2 emissions from the transport and from the quarries: that process is done directly in-situ, converting wastes into a homogenous & liable material being potentially stored on site.
This treatment process has existed since Roman times: repairing the mechanical structure of unstable particles in water changes by adding lime. Facing this problem, we therefore developed a mobile machine capable of performing this treatment with a high level of accuracy, a perfect homogenous mixture and a high productivity, allowing a large range of materials to be processed (up to 28% humidity).
Three variants of these machines are available: treating 50 to 200 tons / hour of debris, with an embedded silo with capacity from 2 to 30 tons.

In any site, the cycle standard is :
- Excavation
- Loading in a road transport
- Payment for the landfilling
- Purchase of noble materials from career
- Transportation to the site
- Establishment of the stabilized materials

Tough matters (stones…) are separated from the sludge. The quicklime is then mixed (with

accuracy thanks to an embedded software and a double weighing system taking into account the water content) in order to obtain a homogenous structure which can be stored on site. The quicklime enables to fix particles which are instable due to hydrometric variations.

Industrial manufacturer of machinery & recycling materials in public works or careers is sought for a license agreement (or for purchase of the patent), for an international exploitation of that innovative solution. Thirty machines have been manufactured (it is possible to obtain contact details of current users of that machine, for an experience feedback).

Advantages and Innovations

Process capable to solve logistic / storage / loading issues, while reducing costs and eliminating transport & CO2 emission.
The average price for one ton with a standard method (landfill disposal) is around 15 Euros/T.
The price with that machine is 5 Euros/T (roughly 3 times cheaper).

Stage of Development

Already on the market

IPR Status

Patents granted

Comment Regarding IPR status

European patent applied

Profile Origin

Private (in-house) research

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Send to Sector Group

Environment

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2004

Turnover

<1M

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
French

Client Country

France

Partner Sought

Type and Role of Partner Sought

Type of partner sought : Enterprise, industry

Specific area of activity of the partner : Manufacturing of materials and machines for debris treatment

Task to be performed : manufacture and commercial exploitation of the system (under license agreement or after purchase of the patent)

Type and Size of Partner Sought

SME 11-50,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

License agreement

Scottish company seeking technology and know-how for recycling waste plasterboard.

Summary

A Scottish SME specialising in waste recycling has developed a process for recycling used plasterboard from building projects to provide a lime product which can be used in agriculture. They are seeking to enter into a commercial agreement with technical assistance with an industry partner who can share best practice and supply them with, or help them to develop, a compact machine which will enable them to carry out the recycling efficiently at a local level.

Creation Date	04 October 2016
Last Update	10 October 2016
Expiration Date	10 October 2017
Reference	TRUK20161004001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/3955c9d3-a86e-45a5-ba56-e7b30c71f2e5

Details

Description

Current legislation around the disposal of used and waste plasterboard has resulted in in becoming a major expense for companies in the building trade. A Scottish SME which operates within the recycling industry has been experimenting with a method of separating the component parts of waste plasterboard in order to make a lime product which can be used in the agriculture sector as a fertiliser. This is not a new concept and there is strict legislation governing the amount of the waste product which can be applied, its use as either a fertiliser or a soil improver and its proximity to water courses.

Having identified a local market for the product, the SME is looking to exchange knowledge and best practice with other businesses within the recycling industry who may have used a similar process. They are seeking either an existing machine which would be suitable for this process or an industry partner who could help them develop such a machine. They envisage working with an industry partner under a commercial agreement with technical assistance.

Technical Specification or Expertise Sought

The company is looking to source or develop a machine capable of separating out the component parts of plasterboard so that the plaster core can be ground down and used as fertiliser in the agriculture industry.

They require a compact machine which can be used at a local level to provide a service for small companies working in the construction sector.

Network Contact

Issuing Partner

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English

Client Country

United Kingdom

Partner Sought

Type and Role of Partner Sought

They are seeking industry partners working in the field of recycling or the supply, design and manufacture of machinery. The role of the partners will be to share best practice and knowledge on the recycling process and to supply or develop an appropriate machine which the SME can use in its process.

Type of Partnership Considered

Commercial agreement with technical assistance