Development of ceramic and multi material components by additive manufacturing methods for personalized medical products

Fact Sheet

Project Information

CerAMfacturing
Grant agreement ID: 678503
Project website

Funded under
H2020-EU.2.1.5.1.

Overall budget
€ 5 121 799,50
EU contribution
€ 5 121 799,50

Coordinated by
FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.
Germany

Start date
1 October 2015
End date
30 September 2018

This project is featured in...
Objective

The cerAMfacturing project will develop a completely new approach for ceramic multi material additive manufacturing which will allow series production of customised and multifunctional components for manifold applications for obtaining property combinations, like electrical conductive/electrical insulating, dense/porous or two-colored components. In five case studies demonstrators for personalized medical products – micro surgical tools, implants, and remedies – such as consumer products will be manufactured starting with the patient specific physical dimensions and ending with components validated under practically relevant conditions. For achieving these goals manifold tasks will be solved starting with method and device development. Especially suspension based additive manufacturing methods will be developed and qualified in cerAMfacturing, because this route promises a much better component performance in comparison to powder based methods. Multi material applications play a dominant role in the project. Beside ceramic/ceramic also ceramic/metal material combinations will be developed. For that purpose either additive manufacturing methods will be qualified or AM methods will be combined with conventional shaping routes like tape casting or ceramic injection moulding. The last mentioned combination of technologies will allow the individualisation of large series production components. Appropriate control methodologies to guarantee a high quality level of the custom made products will be implemented. The cerAMfacturing project will provide the technical equipment for combining AM steps with conventional ceramic shaping routes.

Field of science

/engineering and technology/mechanical engineering/manufacturing engineering/additive manufacturing
/medical and health sciences/medical biotechnology/medical bioproducts/implants

Programme(s)
**Topic(s)**

**Call for proposal**

H2020-FoF-2015

**Funding Scheme**

RIA - Research and Innovation action

**Coordinator**

**FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.**

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<th>Address</th>
<th>Activity type</th>
<th>EU contribution</th>
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<tr>
<td>Hansastrasse 27C</td>
<td>Research Organisations</td>
<td>€ 1 080 625</td>
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<tr>
<td>80686 Munchen</td>
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<td>Germany</td>
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**Website**

**Contact the organisation**

**Participants (9)**

**ADMATEC EUROPE BV**

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<td>Private for-profit entities</td>
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<td>1822 CD Alkmaar</td>
<td>(excluding Higher or Secondary Education Establishments)</td>
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**EU contribution**

€ 518 750

**EYE-D APS**

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**EU contribution**

€ 0

**Contact the organisation**
CERAMICX IRELAND LTD
Ireland
EU contribution
€ 251 507,50
Address
Gortnagrough
n.a. Ballydehob
Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)
Contact the organisation

HAGE SONDERMASCHINENBAU GMBH & CO KG
Austria
EU contribution
€ 320 625
Address
Hauptstrasse 52E
8742 Obdach
Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)
Contact the organisation

MONTANUNIVERSITAET LEOBEN
Austria
EU contribution
€ 477 500
Address
Franz Josef Strasse 18
8700 Leoben
Activity type
Higher or Secondary Education Establishments
Website
Contact the organisation

INMATEC TECHNOLOGIES GMBH
Germany
EU contribution

4 of 6
EU contribution: € 545,730

Address: Heerstrassenbenden 10
53359 Rheinbach

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

Contact the organisation

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EU contribution: € 1,076,250

Address: Ceramtec Platz 1-9
73207 Plochingen

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

Website

Contact the organisation

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EU contribution: € 229,375

Address: Strehlener Strasse 14
01069 Dresden

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

Website

Contact the organisation

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EU contribution: € 621,437

Address: Carl Jacobsens Vej 16 4 Sal
2500 Valby

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

Contact the organisation
Last update: 30 October 2019
Record number: 198348

Permalink: https://cordis.europa.eu/project/id/678503

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