Combining Process Intensification-driven Manufacture of Microstructured Reactors and Process Design regarding to Industrial Dimensions and Environment

Fact Sheet

Project Information

COPIRIDE
Grant agreement ID: 228853

Project website

Status
Closed project

Start date
1 September 2009

End date
31 August 2013

Funded under
FP7-NMP

Overall budget
€ 16 816 774,76

EU contribution
€ 11 000 000

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

This project is featured in...
Objective

The ultimate ambition of COPIRIDE is to develop a new modular production and factory concept for the chemical industry using adaptable plants with flexible output. This concept will be superior, intellectual property (IP) protected, and enable a much wider spread of know-how and education of this skill-intensive technology. Key functional enabling units are new production-scale, mass-manufactured microstructured reactors as well as other integrated process intensification (PI) reactors realising integrated processes. This will lead to a substantial reduction in costs, resources & energy and notably improves the eco-efficiency. To ensure the competitiveness of European (EU) manufacturing businesses, PI technology / know-how is transferred from leaders to countries (and respective medium & small industries) with no exposure in PI so far, but with a track record in sustainability, and to the explorative markets food and biofuels. A deeply rooted base will be created for IP rights (Copyright, © = COPIRIDE) by generic modular reactor & plant design and new generic processes via ‘Novel Process Windows’, facilitating patent filing. Due to the entire modular plant concept comprising all utilities – far beyond the reaction & processual parts - a holistic PI concept is provided, covering the whole development cycle with, e.g., safety & process control & plant approval. Features, inter alia, are fast plant start-up and shut-down for multipurpose functionality (flexibility in products), sustainable & safe production, and fast transfer from lab to production & business (time-to-market). Industrial demonstration activities up to production scale with five field trials present a good cross-section of reactions relevant to the EU chemical industry. The economic impact in COPIRIDE is 10 Mio €/a (cautiously...
The economic impact in COP-TRIIDE is 10 Mio €/a (cautiously optimistic) to 30 Mio €/a (optimistic) by direct exploitation. Indirect exploitation might sum up to 800 Mio €/a (very optimistic) by other companies via technology transfer.
INSTITUT FUER MIKROTECHNIK MAINZ GMBH

- Germany
- EU contribution: €2,336,437
- Address: Carl-zeiss-str. 18-20, 55129 Mainz
- Activity type: Research Organisations
- Administrative Contact: Frank Hainel (Dr.)

EVONIK OPERATIONS GMBH

- Germany
- Address: Rellinghauser Strasse 1-11, 45128 Essen
- Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)
- Administrative Contact: Thomas Rode (Mr.)

MICROINNOVA ENGINEERING GMBH

- Austria
- EU contribution: €595,800
- Address: Europapark 1
- Activity type: Private for-profit entities
8412 Allerheiligen Bei Wildon (excluding Higher or Secondary Education Establishments)

Website Contact the organisation

Administrative Contact
Dirk Kirschneck (Dr.)

**INGEG S.R.L**

Italy

EU contribution

€ 320 000

Address Activity type

Strada Ribrocca 11
15057 Tortona

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Website Contact the organisation

Administrative Contact

Alessandra Frattini (Ms.)

**UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II**

Italy

EU contribution

€ 533 000

Address Activity type

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Higher or Secondary Education Establishments

Website Contact the organisation

Administrative Contact

Claudio De Rosa (Prof.)

**FRIEDRICH-SCHILLER-UNIVERSITAT JENA**

Germany

EU contribution

€ 298 214

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**UNIVERSITY OF NEWCASTLE UPON TYNE**

**Address**
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NE1 7RU Newcastle Upon Tyne

**Website**

**Administrative Contact**
Nicola Place (Ms.)

**ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE**

**Address**
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1015 Lausanne

**Website**

**Administrative Contact**
Lioubov Kiwi-Minsker (Prof.)

**POLITECNICO DI TORINO**

**Address**

**EU contribution**

**Furstengraben 1**
07743 Jena

**Website**

**Administrative Contact**
Dana Kralisch (Dr.)
Corso Duca Degli Abruzzi 24
10129 Torino

Higher or Secondary Education Establishments

Administrative Contact
Guido Saracco (Prof.)

TECHNISCHE UNIVERSITEIT EINDHOVEN

Netherlands
€ 690 961

Address
Groene Loper 3
5612 AE Eindhoven

Higher or Secondary Education Establishments

Administrative Contact
Engin özer (Mr.)

ABO AKADEMI

Finland
€ 436 000

Address
Domkyrkotorget 3
20500 Abo

Higher or Secondary Education Establishments

Administrative Contact
Henrik Saxen (Prof.)

UNIVERSITAET STUTTGART

Germany
€ 394 025

Address
Activity type
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<td>Solvaystrasse 31, 79639 Grenzach-wyhlen</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
<td>€ 138 250</td>
<td>Michael Freund (Mr.)</td>
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<td>laserzentrum schorcht GmbH</td>
<td>Eichenweg 2, 07616 Peterberg</td>
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