Processing and Characterization of Advanced Nano-Composites for Resource-efficient Applications and Technologies

Fact Sheet

Project Information

CREATe-Network
Grant agreement ID: 644013
Project website

Funded under H2020-EU.1.3.3.
Overall budget € 639 000
EU contribution € 639 000

Start date 1 January 2015
End date 31 December 2018

Coordinated by UNIVERSITAT DES SAARLANDES Germany

Objective

CREATe-Net is composed of 3 academic institutions in Europe (Saarland Univ., DE; Technical Univ. of Catalonia, ES; and INM - Leibniz Institute for New Materials, DE), 3 non-academic institutions in Europe (AB Sandvik Coromant, SE; Steinbeis Research and Innovation Centers, DE; and Nanoforce Ltd., UK), as well as 6 academic partners outside Europe (CSIR - Council for Scientific and Industrial Research, ZA; Univ. Católica de Uruguay, UY; Instituto de Investigaciones en Ciencia e Ingeniería de Materiales, AR; Univ. de Concepción, CL; Univ. de Sao Paulo, BR; and Georgia Institute of Technology, US).

The network will cooperate in the field of design, processing and characterization of novel composite materials for resource-efficient applications and environmentally friendly technologies, in particular energy storage, bearings, electrical contacts, and
The purpose of the network is to combine different thematic expertises of the academic and industrial network members in the multidisciplinary field of materials science and engineering in order to design new composite materials with superior properties and performance. The expertise of the network includes:

a) design by modelling at different scales (e.g. atomistic modelling, thermodynamic and kinetic modelling, finite element modelling);
b) novel processing methods (e.g. atomic layer deposition, severe plastic deformation and rapid solidification);
c) advanced characterization methods (e.g. serial sectioning and atom probe tomography, high resolution transmission electron microscopy);
d) processing/characterization of carbon materials, metal and ceramic matrix composites as well as functionally graded materials; and
e) performance testing for targeted applications (available through special designed testing facilities at the research centres and industrial partners).

Two workshops and one final conference will contribute to the exchange of knowledge beside the exchange of researchers.

Field of science
/ engineering and technology / materials engineering / composites

Programme(s)

Topic(s)

Call for proposal
H2020-MSCA-RISE-2014

Funding Scheme
MSCA-RISE - Marie Sklodowska-Curie Research and Innovation Staff Exchange (RISE)

Coordinator

UNIVERSITAT DES SAARLANDES

Address
Campus 66123 Saarbrucken

Activity type
Higher or Secondary Education Establishments

EU contribution
€ 334 305
Participants (5)

LEIBNIZ-INSTITUT FUER NEUE MATERIALIEN GEMEINNUETZIGE GMBH

Germany

EU contribution

€ 45 000

Address

Campus D2 2
66123 Saarbruecken

Activity type

Research Organisations

Contact the organisation

UNIVERSITAT POLITECNICA DE CATALUNYA

Spain

EU contribution

€ 133 065

Address

Calle Jordi Girona 31
08034 Barcelona

Activity type

Higher or Secondary Education Establishments

Website

Contact the organisation

SANDVIK COROMANT AB

Sweden

EU contribution

€ 69 750

Address

Mossvaegen 10
811 81 Sandviken

Activity type

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

Website

Contact the organisation

STEINBEIS TRANSFER GMBH

Germany

EU contribution
<p>| Partners (8) |
|-----------------|-----------------|
| <strong>Nanoforce Technology Limited</strong> |
| EU contribution |
| € 0 |
| <strong>UNIVERSIDAD CATOLICA DEL URUGUAY DAMASO ANTONIO LARRANAGA ASOCIACION CIVIL</strong> |
| <strong>UNIVERSIDAD DE CONCEPCION</strong> |
| <strong>INSTITUTODEINVESTIGACIONSENCIENCIAYTECNOLOGIADE</strong> |</p>
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<td>Avenida Libertador Bernardo O'higgins 340 8331150 Santiago</td>
<td>Higher or Secondary Education Establishments</td>
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**Permalink:** [https://cordis.europa.eu/project/id/644013/](https://cordis.europa.eu/project/id/644013/)

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