Porous material Analysis Toolbox - Open source

Fact Sheet

Project Information

PATO

Grant agreement ID: 753412

Project website

DOI
10.3030/753412

Project terminated on 17 January 2019

EC signature date
15 March 2017

Start date
1 January 2018

End date
31 December 2019

Funded under
EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost
€ 185 076,00

EU contribution
€ 185 076,00

Coordinated by
ECOLE NATIONALE SUPERIEURE D'ARTS ET METIERS
France

Objective

"The objective of the proposal is to advance fundamental science in reactive porous material modeling to foster innovation on the second pillar of the work program ""Leadership in Enabling and Industrial Technologies"". Starting from the most advanced development done at NASA in the last decade, state-of-the-art reactive porous material models will be improved further with the contribution of expert theoreticians and implemented in a simulation tool released open source. The fundamental developments will be validated and applied to design optimization and process innovation for two industrial applications. The first one is the design of efficient and optimized thermal protection systems for space exploration vehicles

(subprogram ""space"").The second one targets bio-hydrocarbon and bio-carbon production from lignocellulosic biomass. The biomass pyrolysis process will be studied from the wood-cell scale to the process level. The goal is to develop advanced predictive engineering tools to enable process optimization and guide innovation in progress. This second effort will eventually benefit to two ""Societal Challenges"" of the work program: ""Energy"" and ""Climate action, environment, resource efficiency, and raw materials"".
"

Fields of science (EuroSciVoc)

natural sciences > physical sciences > astronomy > **space exploration**

engineering and technology > mechanical engineering > vehicle engineering > aerospace engineering > astronautical engineering > **spacecraft**

engineering and technology > industrial biotechnology > biomaterials > **biofuels**

agricultural sciences > agricultural biotechnology > **biomass**

natural sciences > computer and information sciences > software > software applications > **simulation software**

Keywords

thermal protection systems | ablation | pyrolysis | biomass

Programme(s)

H2020-EU.1.3. - EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions MAIN PROGRAMME

H2020-EU.1.3.2. - Nurturing excellence by means of cross-border and cross-sector mobility

Topic(s)

MSCA-IF-2016 - Individual Fellowships

Call for proposal

H2020-MSCA-IF-2016

See other projects for this call

Funding Scheme

MSCA-IF - Marie Skłodowska-Curie Individual Fellowships (IF)

Coordinator

ECOLE NATIONALE SUPERIEURE D'ARTS ET METIERS

Net EU contribution

€ 185 076,00

Total cost

€ 185 076,00

Address

BOULEVARD DE L HOPITAL 151
75013 Paris
France

Region

Ile-de-France > Ile-de-France > Paris

Activity type

Higher or Secondary Education Establishments

Links

Contact the organisation Website
Participation in EU R&I programmes
HORIZON collaboration network

Last update: 23 July 2023

Permalink: https://cordis.europa.eu/project/id/753412