New Particle Formation in Polluted Atmospheres by Nanocluster Dynamics Assessment

Fact Sheet

Project Information

NPF-PANDA

Grant agreement ID: 895875

Project website

DOI
10.3030/895875

Project closed

EC signature date
7 April 2020

Start date
1 May 2020

End date
3 September 2022

Funded under
EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost
€ 190 680,96

EU contribution
€ 190 680,96

Coordinated by
HELSINGIN YLIOPISTO
Finland

Project description

Investigating how new particles form in polluted areas

The formation of atmospheric particles starts from the growth of small molecular clusters. However, the probability that freshly formed clusters reach larger sizes in heavily polluted urban areas is small because aerosol particles act as a sink for them and for condensable vapours. The EU-funded NPF-PANDA project plans to measure cluster-size distributions below 3 nm in urban areas using multiple instruments and

data analysis methods. By combining measurements from Beijing with laboratory experiments at the CERN CLOUD chamber, the magnitude of the underlying microphysical growth processes such as coagulation or condensation will be disentangled and the effects of different precursor gases will be tested. The project's results will demonstrate how fast growth affects the probability of the newly formed clusters surviving under high condensation sink.

Fields of science (EuroSciVoc)

natural sciences > computer and information sciences > **data science**

natural sciences > physical sciences > theoretical physics > **particle physics**

engineering and technology > environmental engineering > **air pollution engineering**

natural sciences > earth and related environmental sciences > environmental sciences > **pollution**

Keywords

aerosol dynamics | new particle formation | air pollution | cluster growth | megacity environments

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-2019 - Individual Fellowships

Call for proposal

H2020-MSCA-IF-2019

See other projects for this call

Funding Scheme

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

Coordinator

HELSINGIN YLIOPISTO

Net EU contribution

€ 190 680,96

Total cost

€ 190 680,96

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Activity type

Higher or Secondary Education Establishments

Links

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

Last update: 27 December 2023

Permalink: https://cordis.europa.eu/project/id/895875