



Innovative Technologies of Electrochemical Suppression and Electromagnetic Decomposition for NOx Reduction in Aeroengines

Fact Sheet

Project Information

DENOX

Grant agreement ID: 831848

[Project website](#)

DOI
[10.3030/831848](https://doi.org/10.3030/831848)

Project closed

EC signature date
12 December 2018

Start date	End date
1 January 2019	31 December 2023

Funded under
SOCIETAL CHALLENGES - Smart, Green And Integrated Transport

Total cost
€ 609 196,00

EU contribution
€ 609 196,00

Coordinated by
SCIENCE AND TECHNOLOGY
CENTER IN UKRAINE
 Ukraine

Project description

New technologies to curb NOx aircraft emissions

Improving fuel efficiency and reducing harmful emissions are key goals of aero engine manufacturers, as they constitute a large part of aircraft operating costs. The EU-funded DENOX project is working on breakthrough technology concepts to

drastically slash nitrogen oxide (NO_x) emissions in gas-turbine aeroengines. The new concepts are related to the electrochemical suppression of NO_x generation in the primary combustion zone and the electromagnetic decomposition of NO_x molecules in the engine exhaust. If successfully demonstrated and further advanced to higher technology readiness levels, the DENOX concepts will help contribute to achieving the ambitious goal of ACARE of reducing NO_x emitted by aeroengines by 90 % before 2050.

Fields of science (EuroSciVoc)

[engineering and technology](#) > [mechanical engineering](#) > [vehicle engineering](#) > [aerospace engineering](#) > [aircraft](#)



Keywords

[NO_x reduction](#)

[low emission combustion](#)

[electrochemical suppression of NO_x molecules](#)

[electromagnetic decomposition of NO_x molecules](#)

[combustion process modelling](#)

[chemical kinetic mechanisms](#)

Programme(s)

[H2020-EU.3.4. - SOCIETAL CHALLENGES - Smart, Green And Integrated Transport](#)

MAIN PROGRAMME

[H2020-EU.3.4.5.10. - Thematic Topics](#)

Topic(s)

[JTI-CS2-2018-CFP08-THT-01 - Innovative NO_x Reduction Technologies](#)

Call for proposal

[H2020-CS2-CFP08-2018-01](#)

[See other projects for this call](#)

Funding Scheme

[RIA - Research and Innovation action](#)

Coordinator



SCIENCE AND TECHNOLOGY CENTER IN UKRAINE

Net EU contribution

€ 37 946,00

Total cost

€ 37 946,00

Address

METALISTIV 7A

03057 Kyiv

 **Ukraine** 

Activity type

Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Participants (1)



NATIONAL AEROSPACE UNIVERSITY KHARKIV AVIATION INSTITUTE NAMED BY N ZUKOVSKIY

 **Ukraine**

Net EU contribution

€ 571 250,00

Address

CHKALOVA STR 17

61070 Kharkiv 

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 571 250,00

Last update: 4 March 2025

Permalink: <https://cordis.europa.eu/project/id/831848>

European Union, 2025