

HORIZON
2020

Local thermal and thermoelectric transport in 2D transition metal dichalcogenide based nanostructures and devices

Fact Sheet

Project Information

THERMIC

Grant agreement ID: 101029727

[Project website](#)

DOI

[10.3030/101029727](https://doi.org/10.3030/101029727)

Project closed

EC signature date

26 April 2021

Start date

1 November 2021

End date

31 October 2023

Funded under

EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost

€ 165 085,44

EU contribution

€ 165 085,44

Coordinated by

"NATIONAL CENTER FOR SCIENTIFIC RESEARCH
"DEMOKRITOS""

 Greece

Project description

2D TMD materials could enable a new generation of optoelectronic and energy harvesting systems

Owing to their extraordinary properties determined by quantum mechanics, 2D materials could prove a boon for many applications, which run the gamut from nanoscale electronic circuits to energy harvesting systems. Funded by the Marie Skłodowska-Curie Actions programme, the THERMIC project is investigating energy dissipation and transport in 2D transition metal dichalcogenide (TMD) nanostructures. The project plans to develop new TMD-based nanostructures and devices using epitaxial growth and lithographic patterning. Scanning probe microscopy will aid the characterisation of local energy transport phenomena in the newly fabricated 2D nanostructures. Understanding of such phenomena will be crucial for the design of next-generation optoelectronic and thermal devices.

Fields of science (EuroSciVoc)

[natural sciences](#) > [physical sciences](#) > [electromagnetism and electronics](#) > [optoelectronics](#)

[engineering and technology](#) > [nanotechnology](#) > [nano-materials](#) > [two-dimensional nanostructures](#)



Keywords

[2D materials](#)

[Phonon transport](#)

[Thermoelectricity](#)

[Thermal management](#)

[Local Seebeck coefficient](#)

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-2020 - Individual Fellowships](#)

Call for proposal

[H2020-MSCA-IF-2020](#)

[See other projects for this call](#)

Funding Scheme

[MSCA-IF - Marie Skłodowska-Curie Individual Fellowships \(IF\)](#)

Coordinator



"NATIONAL CENTER FOR SCIENTIFIC RESEARCH ""DEMOKRITOS"""

Net EU contribution

€ 165 085,44

Total cost

€ 165 085,44

Address

END OF PATRIARCHOU GRIGORIOU E AND 27 NEAPOLEOS STREET

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 **Greece** 

Region

Αττική > Αττική > Βόρειος Τομέας Αθηνών

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

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

[HORIZON collaboration network](#) 

Last update: 20 May 2024

Permalink: <https://cordis.europa.eu/project/id/101029727>

European Union, 2025