



GRAPHERGIA

INNOVATIVE PILOT LINES FOR **SUSTAINABLE** **GRAPHENE-BASED FLEXIBLE AND STRUCTURAL** **ENERGY HARVESTING AND STORAGE DEVICES**

POWERING THE FUTURE WITH GRAPHENE

ENERGY OF TOMORROW

GRAPHERGIA unites European innovators to unlock the potential of laser-assisted graphene production to shape the future of:



OUR METHODOLOGY



ENVIRONMENTAL SUSTAINABILITY



COST-EFFECTIVENESS



SCALABILITY



QUALITY



ADAPTABILITY



MODULARITY



RESOURCEFULNESS

OUR CHALLENGES

GRAPHERGIA aims to tackle the following challenges:



Graphene-based TENG electrodes onto textiles by industrially-relevant, laser-based, green and sustainable processes



Radically novel power management system for highly efficient TENG output



Efficient graphene-based electrodes for LIB devices, by laser-based scalable, green processes

OUR DEMO CASES

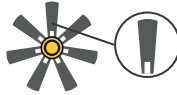
1

All-in-one self-charging textile capable of energy harvesting, storage and health monitoring.



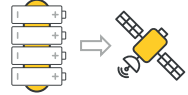
2

Self-powered structurally integrated sensors for aerospace structures.

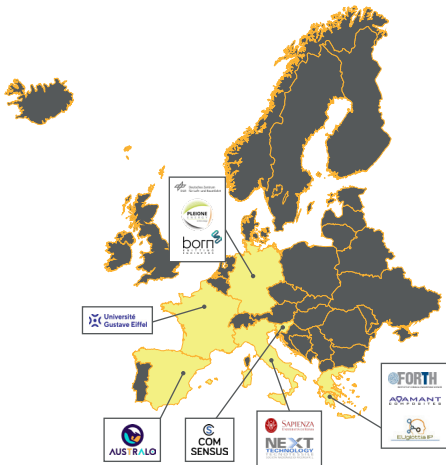


3

Advanced graphene-based LIB module prototype for space applications.



MEET THE GRAPHERGIA TEAM



- Innovation and research project running for 3,5 years, until March 2027.
- Joint collaboration of 11 research and industry partners from 6 European countries.
- 4.5 M€ of budget to revolutionise the realm of energy harvesting/storage through innovative applications of graphene.
- Our novel technologies position us at the forefront of redefining energy solutions, marking a significant leap in sustainable graphene technology development.

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