Design and Integration of Graphene Fibre Based Antennas for Smart Textiles

Fact Sheet

Project Information

GFSMART

Grant agreement ID: 796640

Project website

DOI
10.3030/796640

Project closed

EC signature date
9 March 2018

Start date
1 April 2018

End date
31 March 2020

Funded under
EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost
€ 195 454,80

EU contribution
€ 195 454,80

Coordinated by
THE ROYAL COLLEGE OF ART
United Kingdom

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Objective

Smart textiles that provide a seamless command-oriented user interface and have capable of wireless communication, have become active research field in recent decades with interest of wearable and attractive platforms. Well-known mechanical requirements such as light weight, compactness, and flexibility, that smart components should be invisibly and unobtrusively integrated into a garment to ensure the wearer's comfort. GFSMART aims to develop graphene fibre based antennas for smart textiles that pushes the state-of-the-art in wireless body-centric systems, by utilizing traditional textile manufacturing techniques. Wearable antenna will be developed based on the merits of graphene as a flexible, conductive fibres. GFSMART project does not only involve implementation of novel materials and wearable electronics but also embraces design strategies of smart adaptive garments for people affected by dementia and Alzheimer's disease. The proposal hosting by Royal College of Art (RCA), will involve collaboration with other EU universities, which will increase the impact of the developed results on the textile industry and enable my career restart in European research zone. GFSMART will lead to first implementation of graphene fibres in wearable antenna design and later in designing smart garments for people affected by dementia and Alzheimer's disease. I have extensive experience on carbon nanomaterials and novel materials for textile applications and published more than 30 critically acclaimed journal and conference papers, patents in this subject. Through this innovative multidisciplinary research and with the help of experimental infrastructure provided by the RCA, as a newly appointed senior tutor in smart textiles at RCA, I am expected to gain maturity in managing research projects and advance my career toward being an esteemed professor in the field of smart textiles in Europe.

Fields of science (EuroSciVoc)

medical and health sciences > basic medicine > neurology > dementia > **alzheimer**

engineering and technology > nanotechnology > nano-materials > two-dimensional nanostructures > **graphene**

engineering and technology > materials engineering > **textiles**

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-2017 - Individual Fellowships

Call for proposal

H2020-MSCA-IF-2017

See other projects for this call

Funding Scheme

MSCA-IF-EF-CAR - CAR – Career Restart panel

Coordinator

THE ROYAL COLLEGE OF ART

Net EU contribution

€ 195 454,80

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€ 195 454,80

Address

KENSINGTON GORE
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United Kingdom

Region

London > Inner London — West > Westminster

Activity type

Higher or Secondary Education Establishments

Links

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

Last update: 6 September 2024

Permalink: https://cordis.europa.eu/project/id/796640