Nuclear magnetic long-lived state relaxation

Fact Sheet

Project Information

NuMagLongRx
Grant agreement ID: 891400

Funded under
EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost
€ 212 933,76

EU contribution
€ 212 933,76

Coordinated by
UNIVERSITY OF SOUTHAMPTON
United Kingdom

Project terminated on 31 December 2021

Start date
1 July 2020

End date
30 June 2022

Project description

New tools could reliably predict the polarisation lifetime of magnetic nuclear spins

A major advantage of nuclear magnetic resonance is the relatively long lifetimes of excited nuclear spin states, which allow a deeper understanding of the behaviour and motion of chemical substances. Until now, there has been no method of reliably predicting the lifetimes of long-lived states, which can range from few minutes to hours. What is more, finding the molecules that can function as magnetic resonance beacons is based on guesswork. The EU-funded NuMagLongRx project plans to develop advanced computational tools to facilitate the design of magnetic resonance
beacons that can preserve spin polarisation for many hours. All tools will be open source and supported by documentation, workshops, instructional videos, social media posts and online examples.

**Fields of science**

natural sciences > computer and information sciences > software
natural sciences > computer and information sciences > computational science

**Keywords**

Nuclear Magnetic Resonance  NMR  Long-lived states  Singlet states
Hyperpolarization  Relaxation

**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**
UNIVERSITY OF SOUTHAMPTON

Net EU contribution
€ 212,933,76

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Highfield
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Region
South East (England) > Hampshire and Isle of Wight > Southampton

Activity type
Higher or Secondary Education Establishments

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

Other funding
€ 0,00

EC signature date 13 March 2020
Last update: 24 July 2023

Permalink: https://cordis.europa.eu/project/id/891400

European Union, 2023