Exploring nonclassical states of center-of-mass mechanical motion with superconducting magneto- and levitomechanics

Results

Project Information

SuperMeQ

Grant agreement ID: 101080143

DOI
10.3030/101080143

EC signature date
18 August 2022

Start date
1 October 2022

End date
30 September 2026

Funded under
Digital, Industry and Space

Total cost
€ 2 988 644,00

EU contribution
€ 2 988 644,00

Investment in EU policy priorities

Digital agenda	●	Clean air	○
Artificial Intelligence	○	Climate action	○
Biodiversity	○		

Coordinated by
CHALMERS TEKNISKA HOGSKOLA AB
Sweden

CORDIS provides links to public deliverables and publications of HORIZON projects.

Links to deliverables and publications from FP7 projects, as well as links to some specific result types such as dataset and software, are dynamically retrieved from OpenAIRE.

Deliverables

Documents, reports (3)

First report on work package progress and milestone M4.1

DEC plan
Dissemination, communication and exploitation plan

First Report on work package progress and milestone M3.1
First Report on work package progress and milestone M3.1 (month 12)

Data Management Plan (1)

Data management plan

Websites, patent fillings, videos etc. (1)

Website
Website available via internet

Publications

Peer reviewed articles (4)

High-Q magnetic levitation and control of superconducting microspheres at millikelvin temperatures
Author(s): Hofer, J.; Gross, R.; Higgins, G.; Huebl, H.; Kieler, O. F.; Kleiner, R.; Koelle, D.; Schmidt, P.; Slater, J. A.; Trupke, M.; Uhl, K.; Weimann, T.; Wieczorek, W.; Aspelmeyer, M.
Published in: Physical Review Letters, Issue 131, 043603 (2023), 2023, ISSN

1079-7114
Publisher: APS
DOI: 10.48550/arxiv.2211.06289

Kerr Enhanced Backaction Cooling in Magnetomechanics
Author(s): D. Zoepfl; M. L. Juan; N. Diaz-Naufal; C. M. F. Schneider; L. F. Deeg; A. Sharafiev; A. Metelmann; G. Kirchmair
Published in: Phys. Rev. Lett., Issue 130, 033601 (2023), 2023, ISSN 1079-7114
Publisher: APS
DOI: 10.48550/arXiv.2202.13228

Superconducting Microsphere Magnetically Levitated in an Anharmonic Potential with Integrated Magnetic Readout
Author(s): Martí Gutierrez Latorre; Gerard Higgins; Achintya Paradkar; Thilo Bauch; Witlef Wieczorek
Published in: Physical Review Applied, Issue 19, 054047 (2023), 2023, ISSN 1079-7114
Publisher: ASP
DOI: 10.48550/arxiv.2210.13451

Surface acoustic wave resonators on thin film piezoelectric substrates in the quantum regime
Author(s): Thomas Luschmann; Alexander Jung; Stephan Geprägs; Franz X Haslbeck; Achim Marx; Stefan Filipp; Simon Gröblacher; Rudolf Gross; Hans Huebl
Published in: Materials for Quantum Technology, Issue Vol 3, Iss 2, p 021001 (2023), 2023, ISSN 2633-4356
Publisher: IOP
DOI: 10.48550/arxiv.2301.11213

Other (1)

Remote sensing of a levitated superconductor with a flux-tunable microwave cavity
Author(s): Philip Schmidt, Remi Claessen, Gerard Higgins, Joachim Hofer, Jannek J. Hansen, Peter Asenbaum, Kevin Uhl, Reinhold Kleiner, Rudolf Gross, Hans Huebl, Michael Trupke, Markus Aspelmeyer
Published in: arXiv preprint, Issue 2401.08854, 2024, ISSN 2331-8422
Publisher: arXiv
DOI: 10.48550/arXiv.2401.08854

Last update: 6 September 2024

Permalink: https://cordis.europa.eu/project/id/101080143/results