Optical sorting of cholesteric liquid crystal droplets

Fact Sheet

Project Information

**OPS-CLC**

Grant agreement ID: 101067273

**Funded under**
Marie Skłodowska-Curie Actions (MSCA)

**DOI**
[10.3030/101067273](10.3030/101067273)

**Start date**
1 September 2023

**End date**
31 August 2025

**Total cost**
€ 0,00

**EU contribution**
€ 195 914,88

**Coordinated by**
UNIVERSITE DE BORDEAUX
France

Project description

**Light-induced spinning of enantiomers separates them in a microfluidic chamber**

Chiral molecules have the same chemical formulas and atomic bonds but different 3D configurations. They are ubiquitous in nature and a thorn in synthetic chemists’ side. Often only one of the two is desirable, and the other must be separated out. With the support of the Marie Skłodowska-Curie Actions programme, the OPS-CLC project will harness novel light-matter interactions for contactless separation of enantiomers. Light can exert linear and angular momentum, inducing optical torque that is different for the two enantiomers. OPS-CLC will use this effect to separate enantiomers in liquid crystal droplets immersed in a microfluidic chamber, providing a simple and effective solution to this significant challenge.
Fields of science

natural sciences > physical sciences > classical mechanics > fluid mechanics > microfluidics

natural sciences > physical sciences > optics

natural sciences > mathematics

engineering and technology > materials engineering > liquid crystals

Programme(s)

HORIZON.1.2 - Marie Skłodowska-Curie Actions (MSCA)  MAIN PROGRAMME

Topic(s)

HORIZON-MSCA-2021-PF-01-01 - MSCA Postdoctoral Fellowships 2021

Call for proposal

HORIZON-MSCA-2021-PF-01

See other projects for this call

Funding Scheme

HORIZON-AG-UN - HORIZON Unit Grant

Coordinator

UNIVERSITE DE BORDEAUX

Net EU contribution

€ 195 914,88

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

Other funding
€ 0,00

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