Integrated self-assembled SWITCHable systems and materials: towards responsive organic electronics – a multi-site innovative training action

Fact Sheet

Project Information

iSwitch

Grant agreement ID: 642196

Funded under
EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost
€ 3 826 359,20

EU contribution
€ 3 826 359,20

Closed project

Coordinated by
UNIVERSITE DE STRASBOURG
France

Start date
1 January 2015

End date
31 December 2018

Objective

iSwitch will offer top-level multi-disciplinary and supra-sectorial training to a pool of talented young researchers, involving contributions from different scientific and technological fields such as, supramolecular chemistry, materials, nanoscience,
physics and engineering. iSwitch’s appointees will be trained through lecture courses, dedicated international schools and workshops, topical conferences, secondments to other consortium nodes and an ambitious and carefully planned research activities benefiting from the expertise of world-leading senior PIs and of younger but well-established PIs with outstanding track records in training and research. Additionally, iSwitch will generate new ground-breaking S&T knowledge needed to obtain efficient and fast switching in supramolecular electro- and opto-active materials as a response to external stimuli. This will be accomplished via controlled self-assembly of multicomponent architectures incorporating molecular switches, for fabricating responsive and multifunctional optoelectronic supramolecular devices. We are particularly interested in developing nano- and macro-scale switchable transistors and light-emitting devices as new solutions to (nanoscale) multifunctional organic-based logics.

The specific training and research objectives are:
- Design and synthesis of a (macro)molecular toolbox including electroactive and responsive systems as well as semiconducting and metallic nanostructures
- Controlled interfaces of switches on (non)planar surfaces
- Self-assembly of multicomponent systems into multifunctional architectures and materials
- Multiscale structural, optical and electrical characterization of systems including Scanning Probe studies and time-resolved spectroscopy
- Fabrication and characterization of switchable devices, i.e. transistors for “logics” and light-emitting devices for photonics, and related applications (optical illumination, optical filtering/landscaping, optical sensors, photovoltaics, etc.)

Fields of science

engineering and technology › electrical engineering, electronic engineering, information engineering ›
electronic engineering › sensors › optical sensors

engineering and technology › nanotechnology

engineering and technology › environmental engineering › energy and fuels › renewable energy › solar energy › photovoltaic

natural sciences › physical sciences › optics › spectroscopy

Programme(s)

H2020-EU.1.3. - EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

H2020-EU.1.3.1. - Fostering new skills by means of excellent initial training of researchers

Topic(s)
MSCA-ITN-2014-ETN - Marie Skłodowska-Curie Innovative Training Networks (ITN-ETN)

Call for proposal

H2020-MSCA-ITN-2014

See other projects for this call

Funding Scheme

MSCA-ITN-ETN - European Training Networks

Coordinator

UNIVERSITE DE STRASBOURG

Net EU contribution

€ 547,624,65

Address

Rue blaise pascal 4
67081 Strasbourg
France

Region

Grand Est > Alsace > Bas-Rhin

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

Participants (10)
BASF SE

Net EU contribution
€ 249 216,48

Address
Carl bosch strasse 38
67063 Ludwigshafen am Rhein

Region
Rheinland-Pfalz > Rheinhessen-Pfalz > Ludwigshafen am Rhein, Kreisfreie Stadt

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

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

Other funding
€ 0,00

KATHOLIEKE UNIVERSITEIT LEUVEN

Net EU contribution
€ 238 936,80

Address
Oude markt 13
3000 Leuven

Region
Vlaams Gewest > Prov. Vlaams-Brabant > Arr. Leuven

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
AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS

Spain

Net EU contribution

€ 247,872,96

Address

Calle serrano 117
28006 Madrid

Region

Comunidad de Madrid > Comunidad de Madrid > Madrid

Activity type

Research Organisations

Links

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

Other funding

€ 0,00

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UNIVERSITE DE MONS

Belgium

Net EU contribution

€ 250,560,00

Address

Place du parc 20
7000 Mons

Region

Région wallonne > Prov. Hainaut > Arr. Mons

Activity type

Higher or Secondary Education Establishments

Links

Contact the organisation  Website
Participation in EU R&I programmes
HORIZON collaboration network
HUMBOLDT-UNIVERSITAET ZU BERLIN

Germany

Net EU contribution

€ 498,432,96

Address

Unter den Linden 6
10117 Berlin

Region

Berlin > Berlin > Berlin

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

KARLSRUHER INSTITUT FUER TECHNOLOGIE

Germany

Net EU contribution

€ 249,216,48

Address

Kaiserstrasse 12
76131 Karlsruhe

Region

Baden-Württemberg > Karlsruhe > Karlsruhe, Stadtkreis

Activity type

Higher or Secondary Education Establishments

Links
MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTEN EV

Germany
Net EU contribution
€ 249,216,48

Address
Hofgartenstrasse 8
80539 Munchen

Region
Bayern > Oberbayern > München, Kreisfreie Stadt

Activity type
Research Organisations

Other funding
€ 0,00

CONSIGLIO NAZIONALE DELLE RICERCHE

Italy
Net EU contribution
€ 516,122,64

Address
Piazzale aldo moro 7
00185 Roma

Region
Centro (IT) > Lazio > Roma

Activity type
UNIVERSITY COLLEGE LONDON

United Kingdom

Net EU contribution

€ 273 287,88

Address

Gower street
WC1E 6BT London

Region

London > Inner London — West > Camden and City of London

Activity type

Higher or Secondary Education Establishments

Other funding

€ 0,00

SCRIBA NANOTECNOLOGIE SRL

Italy

Net EU contribution

€ 505 871,87

Address

Via di corticella 183/8
40128 Bologna

SME
Yes

Region
Nord-Est > Emilia-Romagna > Bologna

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

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

Other funding
€ 0,00

Partners (3)

ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE
Switzerland

Net EU contribution
€ 0,00

Address
Batiment ce 3316 station 1
1015 Lausanne

Region
Schweiz/Suisse/Svizzera > Région lémanique > Vaud

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
PARTNER

UNIVERSITA DEGLI STUDI DI MODENA E REGGIO EMILIA

- Italy
- Net EU contribution: €0,00

Address
Via universita 4
41121 Modena
Region
Nord-Est > Emilia-Romagna > Modena
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

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PARTNER

A.P.E. RESEARCH SRL

- Italy
- Net EU contribution: €0,00

Address
Basovizza ss 14 km 163,5 area di ricerca
34012 Trieste
SME
Yes
Region
Nord-Est > Friuli-Venezia Giulia > Trieste
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
- Contact the organisation
- Website
- Participation in EU R&I programmes
- HORIZON collaboration network
Other funding
€ 0,00

**Last update:** 11 August 2022

**Permalink:** [https://cordis.europa.eu/project/id/642196](https://cordis.europa.eu/project/id/642196)

European Union, 2023