

Research Project

MOLECULAR-SCALE ELECTRONICS: Concepts, Contacts and Stability MOLESCO (Chemistry)

Third-party funded project

Project title MOLECULAR-SCALE ELECTRONICS: Concepts, Contacts and Stability MOLESCO (Chemistry)

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Organisation / Research unit

Departement Chemie / Molecular Devices and Materials (Mayor)

Department

Project Website http://cordis.europa.eu/project/rcn/109272_en.html

Project start 01.01.2014

Probable end 31.12.2017

Status Completed

The MOLESCO network will create a unique training and research environment to develop a pool of young researchers capable of achieving breakthroughs aimed at realising the immense potential of molecular electronics. In part this will involve the major challenges of design and fabrication of molecular-scale devices. To deliver this step-change in capability, MOLESCO will coordinate the activities of internationally-leading scientists from six different countries. MOLESCO has secured the participation of nine private sector partners, including one of Europe's leading industrial electronics-research laboratories (IBM Research–Zurich) as a full partner. A highly-integrated approach to the experimental and theoretical aspects of molecular-scale electronics will deliver the fundamental knowledge and new fabrication strategies needed to underpin future nanotechnologies targeted for electronics applications. MOLESCO represents a highly interdisciplinary and intersectoral collaboration between teams with an extensive portfolio of skills, including molecular synthesis, fabrication of molecular junctions, imaging of molecular junctions with atomic resolution, measurements of charge transport, and electronic structure and transport calculations. Training will be delivered in a series of high-priority actions primarily aimed at providing the researchers with an outstanding career development platform. The network has a strong focus on interdisciplinary training; it is built on several well-established and fruitful collaborations between the partners and seeks to bridge an existing educational gap in the European Research Arena. The development of complementary skills (presentation, management, technology transfer, IP protection, outreach and intersectoral training) will be implemented throughout the lifetime of the project. Specialist professional training in dissemination and outreach will be delivered by our Associate Partner BLP, a professional media production company.

Financed by

Commission of the European Union

Add publication

Add documents

Specify cooperation partners