MITEPHO

Project ID: 238393
Funded under: FP7-PEOPLE

Microwave and TErahertz PHOtonics

From 2010-01-01 to 2013-12-31, closed project

Project details

<table>
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<tr>
<th>Total cost:</th>
<th>Topic(s):</th>
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<tr>
<td>EUR 3 098 756,25</td>
<td>FP7-PEOPLE-ITN-2008 - Marie Curie Action: &quot;Networks for Initial Training&quot;</td>
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<th>EU contribution:</th>
<th>Call for proposal:</th>
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<td>EUR 3 098 756,25</td>
<td>FP7-PEOPLE-ITN-2008 See other projects for this call</td>
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<th>Coordinated in:</th>
<th>Funding scheme:</th>
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<td>Spain</td>
<td>MC-ITN - Networks for Initial Training (ITN)</td>
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Objective

MITEPHO (Microwave and TErahertz PHOtonics) is an Initial Training Network that seeks to investigate and optimize photonic sources for CW signal generation at Microwave and Terahertz frequencies. The main objective is to integrate these two disciplines, usually addressed separately, through the development of techniques based on the photonic oscillator concept, a rather new technique for generating low-phase noise signals at the targeted frequency ranges. This approach uses two optical frequencies from a dual-mode laser source which are down-converted in a photomixer generating a beat tone with a frequency given by the difference between the two optical signals. These research objectives belong to an innovative multidisciplinary field that combines different technologies. MITEPHO takes advantage of the different core expertise of partners in W and THz fields from device design to signal generation to integrate those techniques in a common environment to exploit intrinsic synergies. The researchers trained within MITEPHO will be involved in this multidisciplinary environment, where radiofrequency techniques meet photonics, and where research activities combine device design, fabrication and characterization, to the development of applications - all within a consortium formed by academia, research labs, a leading company in the field (Thales, FR), and the participation of several companies as Associated Partners. MITEPHO has set-up a sophisticated and well coordinated training programme in Microwave and Terahertz Photonics at the European level. The programme training activities include on-site courses, joint laboratory training platforms, common training courses at summer schools as well as short courses. As the cooperation between academia and industry is a MITEPHO priority, Thales and associated partners (Companies & Technological Center) will actively participate in the training activities to give the students a complete view of industry environment and needs.

Related information

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<th>Result In Brief</th>
<th>Network training in photonics</th>
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<td>Report Summaries</td>
<td>Final Report Summary - MITEPHO (Microwave and TErahertz PHOtonics)</td>
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Subjects
Education and Training - Scientific Research

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