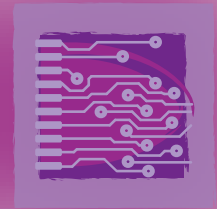


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# ANNA: European Integrated Activity of Excellence and Networking for Nano and Micro-Electronics Analysis

To stay ahead of the game, European researchers need to join forces. Their work is crucial to Europe's economic growth and prosperity. The nanotechnology and microelectronics field is an area where Europe has already shown its innovative potential and carved out a leading position for itself. The ANNA project aims to offer European universities, research institutes, large companies and small and medium-sized enterprises a joint laboratory that addresses threats to the growth of their nanotechnology and microelectronics sector. The companies and researchers involved will benefit from the efforts to solve the challenges they face when using new technology. 12 European research institutions have been unified to form an integrated facility, which provides the European research community with expertise and services.

## ● GOLDEN LABORATORIES

ANNA has established reference laboratories specialised in one or more analytical techniques. They will accredit analytical methodologies according to international quality standard norms. Other actions include making an inventory of the existing installations, providing documentation on existing methodologies and creating a knowledge and inventory database. The reference laboratories work together to compare techniques so as to produce the best results, based on the same standards. They define new methodologies and validate, improve or adapt existing ones. This requires the collection or the production of common reference examples.

In addition, the partners are all linked in a network which will operate as a single laboratory, and which will give access to the single reference laboratories of the consortium. The consortium provides specialised analytical services through transnational activities. These include physical access to documentation, information and consultancy regarding the methodologies and the topics of the joint research activities.



## ● OVERCOMING OBSTACLES BY COMBINING EFFORTS

Universities, research institutes and enterprises are joining hands to undertake research activities addressing specific challenges. They benefit directly from these efforts, which work to overcome technological hurdles and thus ensure that they do not prevent

the growth of the nanotechnology and microelectronics sector. The research is resulting in improved or new analytical methodologies, instrumental or technical development and new insight into material properties and processes.

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Examples of research that is being carried out by the consortium include:

- Highly sensitive detection of inorganic contamination from Li to U
- Comprehension of organic contamination on water surfaces
- Accurate characterisation of ultra shallow junctions
- Nanofilms characterisation
- Investigation of local strain at sub-micron scale

The results of these research activities will be published and

disseminated through the unified website. They will also be presented at conferences and published in specialised journals, workshops and meetings. To ensure effective dissemination, a dissemination plan will be formulated, the results of joint activities will be published, information on the implemented methodologies will be made available and promotional material will be produced. Presentations and congresses will increase the visibility of the project.

## ● EUROPEAN INTEGRATED ACTIVITY OF EXCELLENCE AND NETWORKING FOR NANO AND MICRO-ELECTRONICS ANALYSIS IN SUMMARY

**Project acronym:** ANNA

**Funding scheme (FP6):** Integrated Infrastructure Initiative (I3)

**EU financial contribution:** €5.65 million

**EU project officer:** Jean-Emmanuel Faure

**Duration:** 48 months

**Start date:** 1 December 2006

**Completion date:** 30 November 2010

**Project webpage:** <http://www.anna-i3.org>

**Coordinator:** Massimo Bersani, FBK-irst, Povo, Trento, Italy

**Partners:** FBK-irst, Povo (IT), Fraunhofer Institut für Integrierte Systeme und Bauelementetechnologie IISB (DE), ST Microelectronics M6 srl (IT), MEMC (IT), NCSR Demokritos IMEL (EL), Research Institute for Technical Physics and Materials Science of the Hungarian Academy of Sciences (HU), Surface Science Laboratory - University of Patras (EL) Atominstitut der Österreichischen Universitäten - Vienna Technical University (AT), University of Salford (UK), PTB Berlin (DE), CNR IMM (Bologna section) and IC (Roma section) (IT), Intel Performance Learning Solutions (IE)