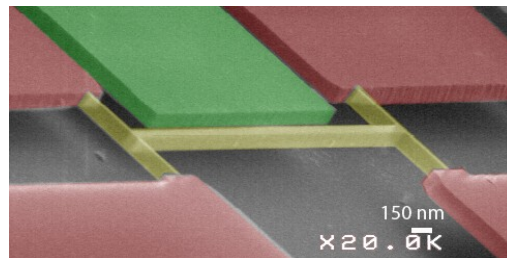




Workshop 1 : from NEMS to products , CALTECH-LETI joint Wednesday, June 24th 2009



Contents

For the past two years, CALTECH-KNI and CEA/LETI-Minatec have joined their fundamental and technology research expertise to transition from the era of “nanocraft” to very-large-scale integration (VLSI) of Nanosystems (CMOS compatible). Researchers from both institutions are closely collaborating to transform nanotechnology-based prototypes into robust, complex sensing systems ready for transfer to industry. The NanoVLSI Alliance (www.nanovlsi.com) opens new application opportunities based on its Nano-ElectroMechanical Systems (NEMS) platform with a strong focus on three main areas: (i) high sensitivity gas-phase chemical sensors including preanalytical and chemical separation modules; (ii) liquid-phase biochemical sensor for pharmaceutical research and point-of-care diagnostics and; (iii) vacuum-based ultra-high resolution mass spectrometry. Products roadmaps have been put in place with first deliverables in less than two years with, for example, a highly sensitive gas chromatograph output detector.

To adequately design and accelerate delivery of these innovations to the market a Sponsor Program has been launched that will enable close interaction between the Alliance and leading industry players.

Three application spaces will be surveyed, each followed by an overview of how NEMS technology can provide transformative advantages. We will summarize our latest and most exciting results, future roadmaps, and long-term perspectives.

Organization committee

Jean-Christophe Gabriel (CEA/Léti)
Philippe Andreucci (CEA/Léti)
Michael Roukes (Caltech/KNI)



Registration & Accommodation

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11th Leti Annual Review

June 22nd - 24th
2009

CEA

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Agenda

| Schedule | | Speaker | Speaker Affiliation | Title of the Presentation |
|--------------------------------------|----------|---|---------------------------------|--|
| 08.45 am | 9.00 am | Introduction: The Alliance for Nanosystems VLSI | | |
| | | A. Cao | Alliance for Nanosystems | |
| | | P. Andreucci | CEA / LETI | |
| 9.00 am | 10.15 am | Ultra high High-Sensitivity & Selectivity, Gas-Phase Chemical Sensing | | |
| | | R. J. Simonson | Sandia National Laboratory | Pre-analytical Module (pre-concentrator, μ GC & μ GC x GC) |
| | | JC Gabriel Ed Myers | CEA / LETI Caltech | Analytical module |
| 10.15 am | 11.00 am | Toward High-Throughput Proteomic μ-Mass Spectrometry | | |
| | | M. Roukes A. Naik | Caltech Caltech | |
| 11.00 am - Break (20') | | | | |
| 11.20 am | 12.20 am | Microfluidic Biosensing for Medical, Pharmaceutical, Environmental, and AgroFood Diagnostics | | |
| | | P. Puget J. Arlett | CEA / LETI & Caltech Caltech | |
| 12.20 am | 12.30 am | Closing, General Q&A | | |
| | | L. Malier | CEA / LETI | |
| 12.30 am - Lunch break (1h30) | | | | |
| 2.00 pm | 4.00 pm | One and One discussions | | |
| | | Please Register with jcgabriel@nanovlsi.com | | |



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