



E-MRS IUMRS ICEM 2006

May 29 to June 2

Acropolis Congress Center, Nice, France



Symposium C : Silicon Nanocrystals for Electronics and Sensing Applications

Silicon nanocrystals show interesting properties that make them appropriate for their use in many different applications, starting from electronics (in combination with the standard CMOS technology or for alternative devices beyond CMOS) and extending to a large variety of other applications in all fields of today's life.

This symposium aims to provide a forum for highlighting the latest developments in this field and for reviewing today's achievements and fields of applications. It will focus on material fabrication, processing and characterization, as well as on different devices based on silicon nanocrystals or using silicon nanocrystals in processing. It will be extended to integration of nanocrystals with the established CMOS technology and to nano-bio-sensing, different kinds of sensors, microfluidics etc.

More specifically, the Symposium will include, but will not be limited to, the following topics :

Silicon nanocrystals (dots, wires and other reduced-dimensionality structures)

- Fabrication and processing
- Properties (electrical, optical, chemical etc)

Devices

- Nanocrystal memories
- Resonant tunneling devices
- Photovoltaics using nanostructured silicon
- Integrated optical sensors
- Light emitting devices
- Characterization
- Testing, properties

Integration with CMOS

- Design
- Integration
- Characterization, testing

Nano-bio sensing, sensors and microfluidics

- Porous silicon and other silicon nanostructures for optical, electrical, chemical, biological sensing
- Sensors technology using nanostructured silicon
- Microfluidics by nanostructured silicon technology

Symposium organizers:

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