



Departamento de
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Frontiers in integrated circuit manufacturing: ultimate energy consumption and quantum computing

The dimensions of semiconductor integrated circuit devices continue to shrink, as dictated by Moore's law, to offer better performance and lower power consumption. Soon, the most advanced technologies, fueled by the enormous data processing needs of artificial intelligence, will enter the sub-nanometer nodes, which implies great difficulties in manufacturing. On the other hand, these technologies can be used to exploit quantum phenomena and thus contribute to the development of practical quantum technology. In this presentation, I will show how new nanofabrication methods are being studied for their introduction in IC fabrication, based on bottom-up concepts such as directed self-assembly and single dopant incorporation, which, in turn enable the realization of single electron devices.

Francesc Perez-Murano is CSIC research professor at the Institute of Microelectronics of Barcelona. His research activity has been centered in the development novel nanofabrication methods for nanoelectronics and nanomechanical devices, in particular nanolithography. Presently, he is participating in several international initiatives to advance in the manufacturing of semiconductor quantum devices.

Con la colaboración de:



03 Abril (jueves)

HORA: 12:30

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