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Special Session

Semiconductor Nanowires: from Controlled Self-Assembly to Device Fabrication

Session Organizer:

Paola Prete – Istituto per la Microelettronica e i Microsistemi, Consiglio Nazionale delle Ricerche, UOS di Lecce, Via Monteroni, I-73100 Lecce, Italy.
paola.prete@cnr.it

Session Abstract:

Semiconductor nanowires, owing to their novel and intriguing physical properties, are considered ideal building blocks for future revolutionary device concepts with novel and/or significantly improved performance. Present synthesis technologies for nanowires fabrication still require to demonstrate their entire potentials in terms of materials/device performances and industrial scalability. Controlled growth of nanowires by self-assembly methods would offer new opportunities to tailor and exploit their microscopic and macroscopic physical properties.

This special section provides a lively forum for presenting and discussing novel results about the rational synthesis and nano-scale characterization of semiconductor nanowires. Design, fabrication and characterization of novel nanowire-based devices are also of interest, as well as applications of such devices in the field of nano-electronics, photonics, and energy conversion and storage.