ΙΤΕ/ΙΕΧΜΗ

ΣΕΜΙΝΑΡΙΟ

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ΟΜΙΛΗΤΗΣ: **Σπύρος Γιαννόπουλος**, Κύριος Ερευνητής
ΙΤΕ/ΙΕΧΜΗ, Πάτρα

ΘΕΜΑ: **Ελεγχόμενη ανάπτυξη και τροποποίηση διατεταγμένων μονοδιάστατων νανοδομών ως μια πλατφόρμα για εφαρμογές στη μετατροπή ενέργειας, στη φωτοκατάλυση, και στους αισθητήρες αερίων ρύπων.**

Controlled growth and modification of ordered nanowire arrays as a platform for energy conversion, photocatalysis, and gas sensors.

ΤΟΠΟΣ: Αίθουσα Σεμιναρίων ΙΤΕ/ΙΕΧΜΗ

ΗΜΕΡΟΜΗΝΙΑ: **Δευτέρα, 14 Νοεμβρίου 2016**

ΩΡΑ: **12:30**

ΠΕΡΙΛΗΨΗ

Exploration of the nano-scale regime has opened new opportunities for science and technology on the basis of unconventional properties of nano-structured materials. Amongst these, one-dimensional structures (1-D) such as semiconductor nanowires (NWs) show a consistent potential for applications and have received significant attention as they combine the nano- with micro-scale dimensions that enables exploitation of a number of effects. ZnO has emerged over the last decade as a key system in nanotechnology and a platform for applications owing to its optical and electronic properties, as well as because it exhibits the most abundant configurations of nanostructures that one single material can adopt. The current talk summarizes our recent activities on the controlled growth of ZnO NW arrays and core-sheath hybrid structures, with the desired morphology (aspect ratio) using predominantly wet chemistry and CVD synthetic routes. Selected applications of ZnO NW arrays for energy conversion (solar cells, H_2 evolution), photocatalytic waste-water treatment, gas sensors and in nano-photonics (SERS substrates) will be reviewed.