



UNIVERSITY OF CRETE
DEPARTMENT OF PHYSICS



QCN

CRETE CENTER FOR
QUANTUM COMPLEXITY
AND NANOTECHNOLOGY

ΓΕΝΙΚΟ ΣΕΜΙΝΑΡΙΟ ΤΜΗΜΑΤΟΣ ΦΥΣΙΚΗΣ

PHYSICS COLLOQUIUM

Thursday, 26 February 2015

17:00 -18:00

3rd Floor Seminar Room

**“Advanced materials & devices concepts for plastic
opto/electronics”**

Prof. Thomas Anthopoulos

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Abstract

Soluble semiconducting materials that can be processed using a wide range of scalable and inexpensive deposition techniques represent an emerging class of electronic materials that could potentially be used to manufacture a wide range of microelectronic devices and systems. Due the relatively modest performance characteristics, however, the use of these alternative semiconductor technologies to date has been limited to conventional thin-film microelectronics and relatively simple integrated systems. In the first part of my talk I will discuss the development of solution-processable semiconductors based on organic and inorganic compounds while in the second part I will describe the development and application of novel patterning methods for the manufacturing of large-area nano-scale devices onto arbitrary substrate materials. These new material concepts combined with our novel processing protocols could potentially pave the way towards hybrid electronics with performance characteristics well beyond current state-of-the-art devices based on conventional semiconductor technologies.