

From an Atom to a Transistor: Multi-scaled Simulations and Modelling of Novel Electronic Devices

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Abstract. Recently interest in electronic, magnetic and optical materials based on inorganic, organic, hybrid and nano-materials has increased significantly. Such new materials and device architectures have a potential to bring the technology and the research into the more than Moore and beyond Moore era. In this seminar, I will present an exciting research in the field of molecular electronics and novel device architecture based on hybrid nano-materials. The main aim is to establish a link between the material properties, device performance and architecture using hierarchical, multi-scaled simulation methods.