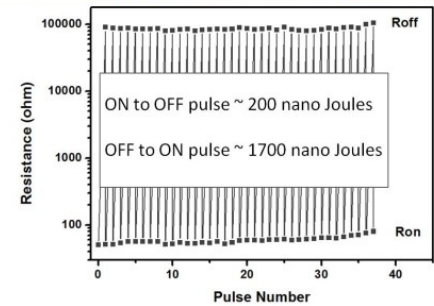
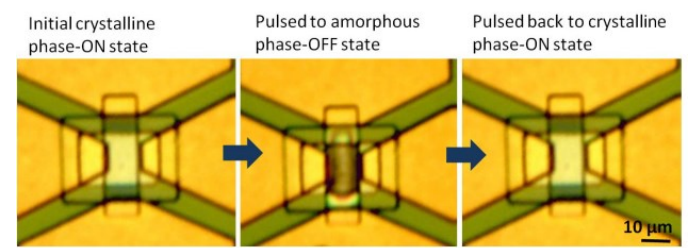
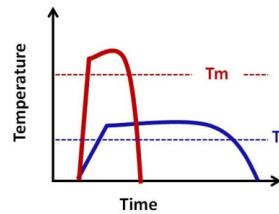
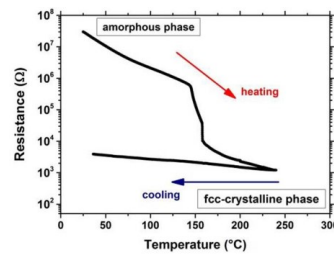


## GREMAN seminar

THURSDAY  
**16**  
 MAY



## Pierre BLONDY

XLIM - CNRS - Universit  de Limoges



# Phase Change Materials for RF Circuits with Memory Elements

2pm - 3pm (amphi F122 - Grandmont)

Phase change materials are widely used in microelectronics for the fabrication of Solid State Devices and integrated memories. These materials conductivity undergoes a sharp change when they are subjected to thermal stimuli. This presentation will cover the applications of these materials to Radio Frequency circuits. In particular, the outstanding properties of GeTe alloy allows fabricating a new generation of tunable RF components. We will present a new type of integrated bi-stable switches that can further be integrated in complex subsystems like antenna arrays, or programmable tunable networks. New types of tunable capacitors have also been developed using the same type of materials. The first generation of these components show very high  $Q$ , and large dynamic range. The small size, and CMOS compatibility of these devices makes them very promising for applications to future microwave and millimetre-wave systems.