



SILICON FRIENDLY MATERIALS AND DEVICE SOLUTIONS FOR MICROENERGY APPLICATIONS

30 Sept 2014 - Bologna Italy

“Micro and nanotechnologies have already made possible the fabrication of small, low cost and good performance sensors that are called to be protagonists of continuous monitoring scenarios and distributed intelligence paradigms. Energy autonomy keeps being one of the most desired enabling functionalities in the context of off-grid applications, such as wireless sensor networks (Internet of Things, Trillion Sensors).

Low energy consumption, energy harvesting (tapping into environmentally available sources such as heat and vibrations), and coupling those harvester devices to secondary batteries to buffer enough energy to account for the power demand peaks required by the communication unit of wireless nodes, may be a good solution in different application scenarios

In a nutshell, SiNERGY (Silicon friendly materials and device solutions for microenergy applications) deals with micro and nanotechnology approaches and 3D architectures for energy harvesting (thermoelectrics / mechanical energy harvesting) and solid state microbatteries. In the workshop the main research lines of the project will be presented together with keynote speeches aligned to the project goals”

Workshop Program

08:45 – 09:00	Registration	
09:00 – 09:10	L. Fonseca, CISIC	SiNERGY Vision & Goals
09:10 – 09:40	A. Ionescu, EPFL	Zero Power concept
09:40 – 10:10	Y. Gelbstein, Ben-Gurion Univ.	Thermoelectric materials: Practical Challenges
10:10 – 10:30	Coffe Break	
10:30 – 11:00	E. Yeatman, Imperial College	Vibration Harvesters (MEMs)
11:00 – 11:30	R. Salot, CEA	Integrated MicroBatteries Status & Perspective
Research Activities from SiNERGY		
11:30 – 11:45	D. Narducci, Unimib	Thermal (Micro-2-Nano) Harvesting
11:45 – 12:00	M. Goedbloed, Holst Centre	Mechanical (Micro) Harvesting
12:00 – 12:15	A. Sepulveda, IMEC-NL	3D Thin Film (Micro) Battery
12:15 – 12:30	R. van Schaijk, Holst Centre	Integration Feasibility
12:30 – 12:45	P. Moiraghi, STE	Application scenario –Tire Monitoring Systems

