

PSMA International Workshop | 26-28 June, 2024 | Perugia, Italy



Day 2 Quick Review (reflections & takeaways)

Roberto La Rosa

Benvenuti, history, context & andiamo

Keynote – Daniela Iacopino

As IoT is going mainstream there is a need to transit asap from the current linear economy to a circular economy.

Disposable of electronic waste is the root of an environmental problem.

- 5 Million of E-waste is produced every year.
- Current materials are not suitable for mass-scale IoT.
- We need to design with circular economy in mind.
- One solution is to use additive manufacturing the produced no waste.
- Direct laser writing on Cork that presents a unique chemical composition.
- Supercapacitors on Cork substrates are possible with 20 mF / cm².
- Still to much academic ?



Morning session

Sustainable Materials

Andrea Lamberti – Material and processes for the Micro & Nano technologies.

Giovanni Landi – On the difficulties encountered in fabricating an eco-friendly supercap.

Daniela Iacopino – EPOSS – European association on Smart System Integration.

Materials Packaging / Integration

Stefano Marchionna – High performing anodes for post-lithium Ion batteries (LIBs Vs SIBs) Peter Woias – Thermal Energy Harvesting from Iow to high Δt. Thermal EH is possible from very Iow voltage > 10 mv. Thomas Brown – Perovskite PV cells. Very high absorption coefficient.

Power Management

Andrea Ballo – An Innovative and optimized charge pump for efficient PMIC. Domenico Balsamo – System operation with intermittent Energy availability. Bruno Damien – Exploring PMICS availability for various application needs.

Demos, posters and panel session

Great discussions, information, networking, hospitality, time management & food!

Demos & posters:-

Lots of workings demos, esp. PV & VEH powered WSN. (Not much TEG and storage?) Lots of materials modelling and optimizations.

Panel session – Sustainable materials

Baoxing Chen – How uTeg can be hosted in a small volume such as that of a coin cell.

Orazio Aiello – UBIGIoT. Big networking in Asia. Could it be useful to organize EnerHarv 202X in Asia?

Brian Zahnstecher – Introducing the Power Source Manufacturing Association (PSMA).

Shad Roundy – Introducing ASSIST project.

Valeria Nico – CONNECT: Vibrational Energy harvesting with 3.35 mW @ 0.2 g.

Alex Weddel – Introducing the UK Energy Harvesting Network.

Thomas Brown – About the Energy Harvesting Roadmap.

ANDIAMO!

EnerHarv 2024



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